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ABSTRACT

A record of two days of hearings is presented conducted by the United States House of Representatives into (1) demographic trends affecting elementary and secondary education and (2) student achievement levels on standardized tests. Prepared statements by each person speaking before the committee are given, dealing with (1) a summary and presentation of demographic trends in elementary and secondary schools, (2) policy implications of declining school enrollments, (3) factors affecting achievement levels on standardized achievement tests, (4) summary presentations of national achievement levels in various curricular areas, and (5) experiences of the Oregon State Department of Education in developing competency based education. Included in the appendices, which constitute the bulk of the document, are (1) the complete "Preliminary Analysis of Demographic Trends Influencing the Elementary and Secondary School System" prepared by the Congressional Office of Technology Assessment, and (2) a report by the Congressional Research Service on "Developing Issues in Elementary and Secondary Education," concerning school finance, educational achievement, and racial segregation. (MJB)

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PART 1: GENERAL ISSUES IN ELEMENTARY AND SECONDARY EDUCATION

HEARINGS

BEFORE THE

SUBCOMMITTEE ON ELEMENTARY, SECONDARY, AND VOCATIONAL EDUCATION

OF THE

COMMITTEE ON EDUCATION AND LABOR
HOUSE OF REPRESENTATIVES

NINETY-FIFTH CONGRESS

FIRST SESSION

ON

H.R. 15

TO EXTEND FOR FIVE YEARS CERTAIN ELEMENTARY, SECONDARY, AND OTHER EDUCATION PROGRAMS

HEARINGS HELD IN WASHINGTON, D.C.
MAY 10, 11, 1977

Printed for the use of the Committee on Education and Labor
CARL D. PERKINS, *Chairman*

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PART 1: GENERAL ISSUES IN ELEMENTARY AND SECONDARY EDUCATION

TUESDAY MAY 10, 1977

House of Representatives,
Subcommittee on Elementary, Secondary
and Vocational Education,
Committee on Education and Labor,
Washington, D. C.

The subcommittee met, pursuant to notice, at 9:40 a.m., in Room 2175, Rayburn House Office Building, Hon. Ronald M. Mottl presiding.

Members present: Representatives Perkins, Mottl, Murphy, LeFante, Kildee, and Pettis.

Staff present: John F. Jennings, majority counsel; Nancy Kober, staff assistant and Christopher Cross, senior minority education consultant.

[Text of H.R. 15 follows:]

95TH CONGRESS
1ST SESSION

H. R. 15

IN THE HOUSE OF REPRESENTATIVES

JANUARY 4, 1977

Mr. PERKINS introduced the following bill; which was referred to the Committee on Education and Labor

---

A BILL

To extend for five years certain elementary, secondary, and other education programs.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That this Act may be cited as the "Elementary and Secondary Education Act of 1977".

ELEMENTARY AND SECONDARY EDUCATION ACT OF 1965

SEC. 2. (a) (1) Section 102 of title I of the Elementary and Secondary Education Act of 1965 is amended by striking out "1978" and inserting in lieu thereof "1983".

(2) Section 125 of such title I is amended by striking out "1978" and inserting in lieu thereof "1983".

(3) Section 148 (c) of such title I is amended by striking out “1978” and inserting in lieu thereof “1983”.

(b) Sections 201 (b) and 301 (b) of the Elementary and Secondary Education Act of 1965 are each amended by striking out “five” and inserting in lieu thereof “ten”.

(c) Sections 305 (c) and 309 (c) of such Act are each amended by striking out “1978” and inserting in lieu thereof “1983”.

(d) Sections 401 (a) (1) and 401 (b) (1) of such Act are each amended by striking out “two” and inserting in lieu thereof “seven”.

(e) Sections 501 (b), 521 (b), and 531 (b) of such Act are each amended by striking out “five” and inserting in lieu thereof “ten”.

(f) (1) Sections 702 (b) (1) and 702 (b) (2) of the Bilingual Education Act are each amended by inserting immediately before the period at the end thereof the following “and for each of the following five fiscal years”.

(2) Section 723 (a) (2) of the Bilingual Education Act is amended by striking out “1978’ and inserting in lieu thereof “1983”.

(g) Sections 807 (c) and 808 (d) of the Elementary and Secondary Education Act of 1965 are each amended by striking out “five” and inserting in lieu thereof “ten”.

(h) Sections 810 (g), 811 (d), and 907 of such Act are each amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

EMERGENCY SCHOOL AID ACT

SEC. 3. (a) Section 704 (a) of the Emergency School Aid Act is amended by striking out "1979" and inserting in lieu thereof "1984".

(b) Sections 704 (c) and 704 (d) of such Act are each amended by inserting immediately after "1978" the following "and each of the following five fiscal years".

(c) Section 716 (b) of such Act is amended by striking out "1979" and inserting in lieu thereof "1983".

FEDERALLY IMPACTED SCHOOL DISTRICTS

SEC. 4. (a) Sections 2 (a), 3 (b), 4 (a), and 7 (a) (1) of the Act of September 30, 1950 (Public Law 874, Eighty-first Congress) are each amended by striking out "July 1, 1978" where that term occurs and inserting in lieu thereof "October 1, 1983".

(b) (1) Section 3 of the Act of September 23, 1950 (Public Law 815, Eighty-first Congress) is amended by striking out "June 30, 1978" and inserting in lieu thereof "September 30, 1983".

(2) Section 16 (a) (1) of such Act of September 23, 1950 is amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

(3) Section 15(15) of such Act of September 23, 1950 is amended by striking out "1973–1974" and inserting in lieu thereof "1978–1979".

INDIAN EDUCATION

SEC. 5. (a) (1) Sections 422(c) and 423(a) of the Indian Education Act are each amended by striking out "three" and inserting in lieu thereof "eight".

(2) Section 442(a) of the Indian Education Act is amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

(b) Section 303(a)(1) of the Indian Elementary and Secondary School Assistance Act is amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

ADULT EDUCATION ACT

SEC. 6. (a) Sections 310(b) and 311(b) of the Adult Education Act are each amended by striking out "1978" and inserting in lieu thereof "1983".

(b) Section 313(a) of such Act is amended by striking out "June 30, 1978" and inserting in lieu thereof "September 30, 1978, and each of the five following fiscal years".

(c) Section 314(d) of such Act is amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

SPECIAL PROJECTS ACT

SEC. 7. (a) Section 3 (a) of the Special Projects Act is amended by striking out "June 30, 1978" and inserting in lieu thereof "September 30, 1983".

(b) Section 4 (a) (1) of such Act is amended by striking out "two" and inserting in lieu thereof "seven".

(c) Sections 403 (d), 404 (h), and 405 (i) of such Act are each amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

(d) (1) Section 406 (f) (1) of such Act is amended by striking out "June 30, 1978" and inserting in lieu thereof "September 30, 1983".

(2) Section 406 (f) (2) of such Act is amended by striking out "June 30, 1977" and inserting in lieu thereof "September 30, 1982".

(3) Section 406 (h) of such Act is amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

(e) Section 408 (h) of such Act is amended by striking out "July 1, 1978" and inserting in lieu thereof "October 1, 1983".

(f) Section 409 of such Act is amended by striking out "June 30, 1978" and inserting in lieu thereof "September 30, 1983".

NATIONAL READING IMPROVEMENT ACT

SEC. 8. (a) Section 732 (a) of the Education Amendments of 1974 is amended by inserting immediately after "1978" the following: "and for each of the five following fiscal years".

(b) Sections 732 (b) and 732 (d) of such Act are each amended by inserting immediately after "1978" the following: ", and for each of the five following fiscal years".

(c) Sections 732 (e) and 732 (f) of such Act are each amended by striking out "the succeeding fiscal year" and inserting in lieu thereof "each of the six following fiscal years".

(d) Section 732 (g) of such Act is amended by striking out "two" and inserting in lieu thereof "seven".

EXTENSION OF ADVISORY COMMITTEES

SEC. 9. (a) Section 405 (g) (1) of the Special Projects Act is amended by adding at the end thereof the following: "Subject to section 448 (b) of the General Education Provisions Act, the Advisory Council shall continue to exist until October 1, 1983.".

(b) Section 406 (g) (1) of such Act is amended by adding at the end thereof the following: "Subject to section 448 (b) of the General Education Provisions Act, the National Advisory Council for Career Education shall continue to exist until October 1, 1983.".

(c) Section 408 (f) (1) of such Act is amended by adding at the end thereof the following: "Subject to section 448 (b) of the General Education Provisions Act, the Council shall continue to exist until October 1, 1983.".

(d) Section 541 (a) (1) of the Elementary and Secondary Education Act of 1965 is amended by adding at the end thereof the following: "Subject to section 448 (b) of the General Education Provisions Act, the National Council shall continue to exist until October 1, 1983.".

(e) Section 732 (a) of the Bilingual Education Act is amended by adding at the end thereof the following: "Subject to section 448 (b) of the General Education Provisions Act, the Council shall continue to exist until October 1, 1983.".

Mr. MOTTL. The subcommittee will now come to order. In the absence of Chairman Perkins, who will be delayed coming here this morning, I will read his opening statement.

The Subcommittee on Elementary, Secondary and Vocational Education is beginning hearings today on general trends and issues affecting elementary and secondary education. This set of hearings marks the opening of an extensive series of oversight hearings the subcommittee will be holding on all of the elementary and secondary education programs that expire at the end of fiscal year 1978. Later on in the year, we will spend some time on each of the individual programs.

Today and tomorrow, however, we will be hearing testimony on general trends that have implications for the future of elementary and secondary education for all the programs. We have scheduled these hearings to exercise the foresight provision of the rules of the House, which require that from time to time each committee shall undertake futures research and forecasting on matters within the jurisdiction of that committee.

Today we will focus on demographic trends that have an impact on elementary and secondary education, particularly the question of declining enrollments. In connection with this hearing, we requested the Office of Technology Assessment to do a study of demographic trends affecting elementary and secondary education. Mr. Joseph Coates, from the Office of Technology Assessment, is here today to present some of his findings from this larger study. When his larger study is completed it will be made part of today's hearing record as Appendix 1. We will also be hearing from Mr. Denis Doyle of the National Institute of Education, who has headed up a study of declining enrollments and their possible implications there. Dr. Mary Golloday from the National Center for Education Statistics will provide us with some of the Center's statistical findings and projections of trends that have the greatest implications for the future of elementary and secondary education.

Tomorrow's hearing will focus on various trends related to student achievement, including the problem of declining test scores.

I would like to insert as Appendix 2 to today's hearing record a paper on three developing issues in elementary and secondary education prepared for the subcommittee with the assistance of Mr. Robert Lyke of Congressional Research Service. This paper has been distributed to all the members and, I think, provides useful background information for these hearings.

As a third appendix, I would like to insert in the record at a later date some letters from educational experts around the country giving their views of the future of elementary and secondary education. These letters are being solicited by the Congressional Clearinghouse on the Future.

Before we begin I would like to commend George Miller for urging me to schedule these foresight hearings and to contact OTA to do the study of demographic trends for us. I believe that we will find these hearings to be of great use to us as we review all of the Federal elementary and secondary education programs.

On our panel we will have Mr. Joseph Coates of the Office of Technological Assessment, Mr. Denis Doyle of the National Institute of Education and Dr. Mary Golladay from the National Center for Education Statistics.

Would you like to open up the hearings at this time, Mr. Coates?

[The prepared statement submitted by Mr. Coates follows:]

Testimony of

Joseph F. Coates
Assistant to the Director
Office of Technology Assessment

on

Demographic Trends Influencing the Elementary and Secondary School System

Before

Subcommittee on Elementary and Secondary School Education

House Committee on Education and Labor

May 10, 1977

Mr. Chairman, it is a pleasure to have this opportunity to report to you on an exploratory task conducted by OTA on Demographic Trends Influencing the Elementary and Secondary School System. The primary purpose of that exploratory effort initiated at your request was to help inform the Committee as well as our OTA Board on the nature and kind of full-fledged, in-depth assessment that might be usefully conducted.

The preliminary investigation in response to your request, Mr. Chairman, should be helpful to the Committee during the hearings in your determining whether a full assessment by OTA should be requested.

I propose this morning to discuss the influence of demographic trends on the school system and to highlight some of the implications of shifting enrollment patterns for school planning. One further preliminary note is in order. As I proceeded with this exploratory activity, I enjoyed the enthusiastic cooperation of an interagency task force made up of representatives of the Census Bureau, the U.S. Department of Agriculture, the National Center for Educational Statistics, and the National Institute of Education.

We conducted a two-day workshop drawing upon a wider range of demographers, educational planners, and the academic community. The detailed acknowledgments to all of those who contributed to this effort are in our main report.

A definition may be appropriate. Demography is the branch of the social sciences dealing with the determinants and consequences of population change. It treats vital and social statistics such as birth, death, marriage, disease rates, and the size, density, distribution, and mobility of population.

The principal demographic factors influencing the elementary and secondary school system are shown in Table I.

The well-known baby bust (Figure I) following the post-war baby boom will have the primary nationwide effect over the next 8 to 10 years of reducing the number of children entering the elementary school system. Further, there will be a continuing decline through about 1990 from today's peak in those entering high school.

Some Facts

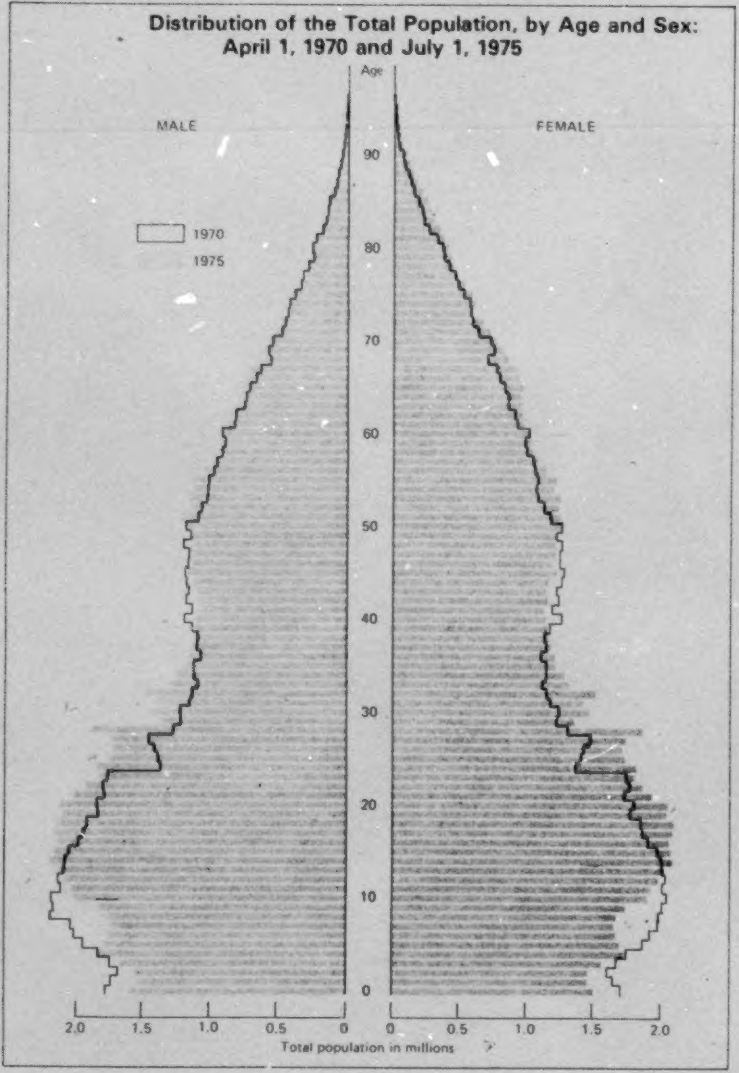
- Numbers of births have fallen nearly every year for the last 18 years.
- The percentage decline in that period is nearly 28 percent (from about 4.3 million to 3.1 million).
- This decline has resulted in a 10 percent decline in elementary school enrollments, with a further decline of 7 or 8 percent certain by the middle of the 1980's. (Between 1969 and 1982 or 3, elementary school enrollment will have declined 16 percent, from about 36,747,000 to about 30,800,000).

TABLE 1

DEMOGRAPHIC TREND CATEGORIES POSSIBLY INFLUENCING ELEMENTARY AND SECONDARY SCHOOL EDUCATION

1. Birth and Fertility Rates
2. The Family
   - o Marriage/Divorce/Separation/Remarriage Rates
   - o Household Size, and Rates of Formation
   - o Female Headed Households
3. Women's Entry Into Work Force Full and Part-time
   - o Working Women
   - o Working Wives
4. Occupational Structure
5. Internal Migration
   - o Metropolitan-Nonmetropolitan
   - o Black/Hispanic/White
   - o Poor/Working Class/Middle Class
   - o The Growth of the Sunbelt
6. Residence
   - o Rural/Urban
   - o Big City-Small City
   - o North-South
   - o Suburban-City
7. Income
   - o Regional Income Patterns
   - o Rising Incomes
   - o Dual Income Families
8. Special Populations
   - o Blacks
   - o Hispanic: Mexican and Puerto Rican
   - o Other Ethnic Groups
9. Immigration from Foreign Countries
10. Youth Employment
11. Educational Level
    - o School Attendance: Public; Private; Parochial
    - o Dropouts
    - o ADC Mothers
12. Puberty

FIGURE 1*



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* References and notes are cited by Section and are collected at the end of the paper.

- Secondary school enrollments reached their peak this year. They will decline through the 1980's, perhaps by as much as 25 percent.
- Enrollment in grades kindergarten through 12 combined, reached a peak in 1970 of 51,309,000. Enrollment will decline through the mid-1980's to about 44,500,000, or about 13 percent).

These forecasts, of course, can be made with extremely high reliability because we are talking about children who are already born. One can also make reasonably reliable and useful extrapolations on the basis of fertility patterns over the next several years. The childbearing rates of women in different age groups change relatively slowly, on the basis of historical experience, from year to year. Consequently, we can extend our reliable forecast out at least an additional three to six years.

The Census Bureau has projected fertility rates for the rest of this century (and beyond) according to three assumed sizes of completed families. These are: 2.7, 2.1, and 1.7 children per woman. 2.1 is widely held to be the most likely in that it is the rate which maintains a stable population.

Some Facts

Series II (2.1 Children) would result in:

- A 19 percent increase in population, 5-13 years old between 1980 and 2000 (30,246,000 to 35,963,000).
- A 6 percent increase in populations, aged 14-17 (15,753,000 to 16,752,000).

Series IIL (2.1 children, with a later average age of childbearing) would result in:

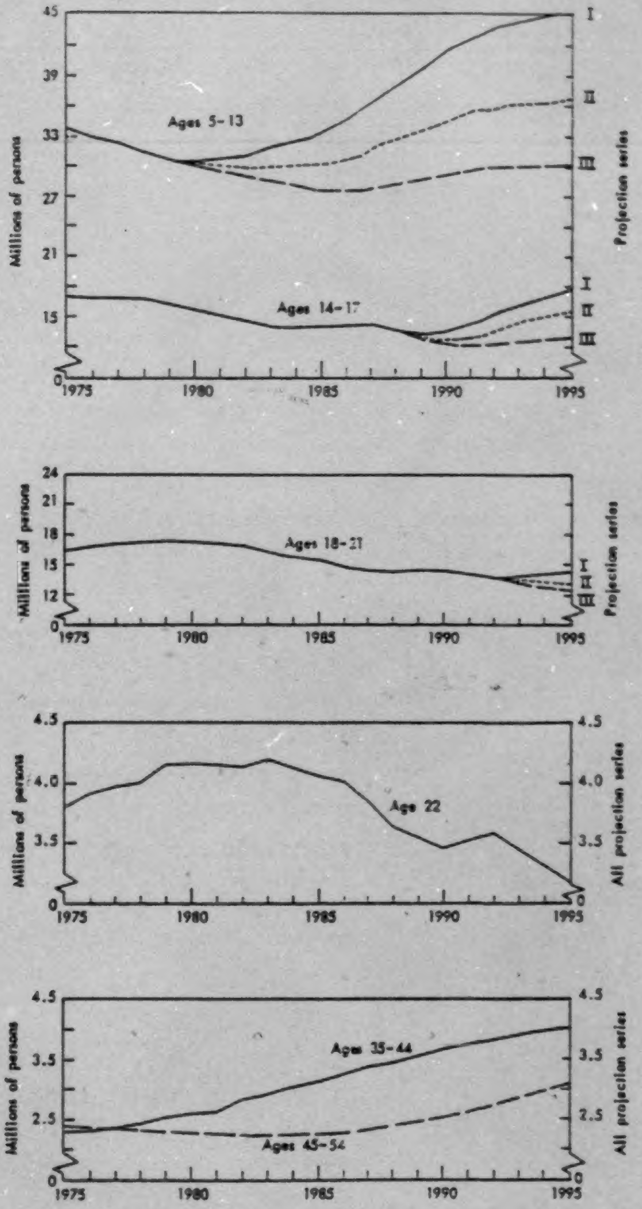
- A 10 percent increase of ages 5-13 between 1980 and 2000 (30,253,000 to 33,213,000).
- A 6 percent decrease at ages 14-17 in the same period (15,753,000 to 14,870,000).

The overall pattern of school age and other populations to 1995 are shown in Figure 2.

There are a number of other demographic factors which make school planning much more complex and uncertain than these simple aggregate fertility rates suggest. These factors have to do with:

- The changing characteristics of the family, the age of marriage, size of family, deferred marriage, and rates of illegitimacy, particularly as they impact the urban school system.
- Women's entry into the work force is increasing and will undoubtedly create more curriculum demands and new service demands.
- Migration from overseas will continue to create an influx of populations, placing special burdens on urban school systems since immigrants are overwhelmingly attracted to urban centers.
- Local mobility—that is, movements within metropolitan or nonmetropolitan areas, movements from city to suburb, and so on—are a major factor creating uncertainty in education planning.
- Internal migration on a larger scale between and among metropolitan and nonmetroplitan areas is another highly destabilizing factor in education planning.

FIGURE 2
Projected Sizes of Functional Age Groups



One major observation merits attention before returning to some of the demographic details. The principal impact of these demographic trends is at the state and local levels. The basic need is for improved demographic planning skills at the state and local level. The primary parallel need at the national level is for improved salient, focused, and timely federal data to complement and facilitate state and local activities.

Let us turn now to some of the demographic details.

The Changing Family

The traditional image of the family, mother, father, and several children has been the underlying and sometime explicit image of the American child's environment around which public policy has been framed. Increasingly, that model of the family is at odds with reality. Rates of marriage, deferred marriage, increased divorce, and separation, as well as remarriage patterns, the size of households, the rates of their formation, and the growing number of female-headed households, are all radically changing the traditional environment of the child (Figure 3).

Some Facts

- For example, it has been estimated that approximately 45 percent of children born in 1976 will have lived with only a single parent for some time before they reach 18 years of age.
- The proportion of children living with both parents declined from 88 percent in 1960, to 83 percent in 1970, and reached 80 percent in 1976. Between 1970

and 1976, the number of children living with a divorced mother increased by two-thirds and the number living with a single mother increased by about 40 percent.

- The growth of female-headed families with children has increased by over 250 percent since 1950. Further, such families comprise 41 percent of all poverty level families.

Single parent families are almost always in relative if not absolute poverty. Limited income will create new demands and stresses as well as the need, if not the pressure, for compensatory public services.

Some Facts

MEAN FAMILY INCOME, 1973

		Single-Parent Families	
Age of Head	Husband-Wife Families	Male-Headed	Female-Headed
Under 25	$ 8,922	$ —	$3,198
25-44	15,114	11,931	5,951
45-64	17,761	12,078	7,205

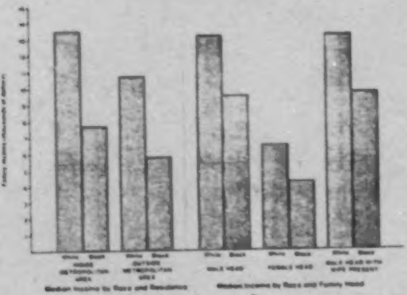
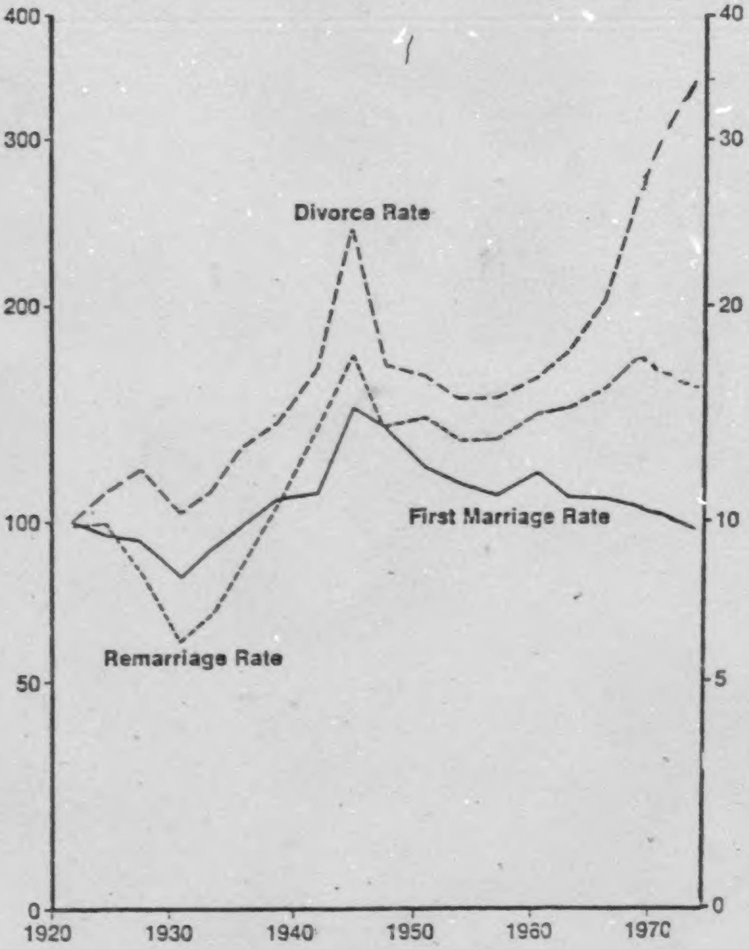


Figure 111 Median Family Income: 1973

FIGURE 3

FIRST MARRIAGE RATES PER 1,000 SINGLE WOMEN, DIVORCE RATES PER 1,000 MARRIED WOMEN, AND REMARRIAGE RATES PER 1,000 WIDOWED OR DIVORCED WOMEN: UNITED STATES, THREE-YEAR AVERAGES, 1921 TO 1971.



More women are having children, but family size on the average is declining.

Some Facts

families and average number of own children under 18 years old, by type of family, labor force status of mother, and race, March 1970 and March 1974

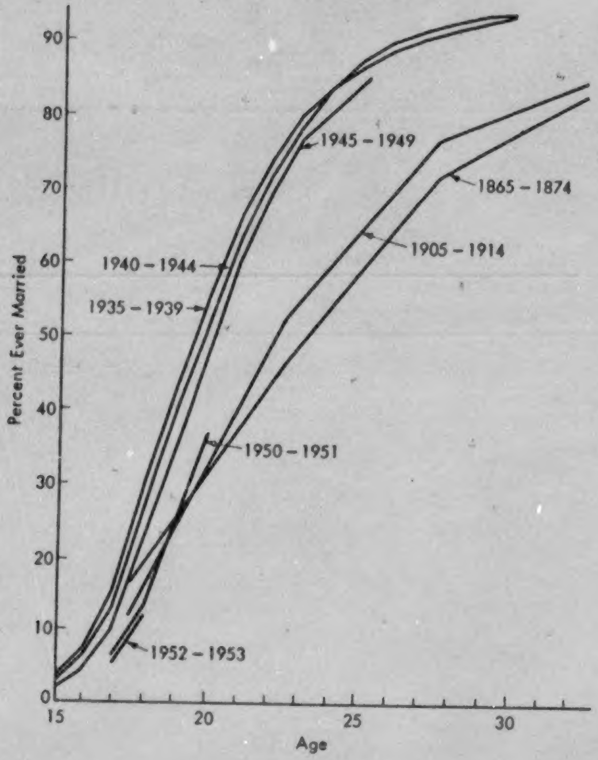
Type of family, labor force status of mother, and race	1970 Average number of children per family[1]	1974 Average number of children per family[1]
WHITE		
Husband-wife families	2.35	2.12
Mother in labor force	2.10	2.03
Mother not in labor force	2.36	2.22
Female family head	2.03	1.93
Mother in labor force	1.88	1.79
Mother not in labor force	2.24	2.26
NEGRO		
Husband-wife families	2.67	2.38
Mother in labor force	2.31	2.20
Mother not in labor force	2.87	2.48
Female family head	2.77	2.46
Mother in labor force	2.48	2.12
Mother not in labor force	3.10	2.88

Women are deferring marriage.

Percentages of Ever-Married Women at Selected Ages, 1960 and 1974

Age	1960	1974
18	24%	18%
20	54	42
22	74	62
24	84	77

Age Pattern of Marriage Birth Cohorts of White Women



Women's Entry into the Work Force

The primary implications for education of the women's entry into the work force are on curriculum and services to the student, on extended care services for the children of working mothers, and reduced amount of time available for parental volunteer services.

Some Facts

- The nearly 36 million women in the labor force in 1974 represents 46 percent of all women aged 16 or over, and 39 percent of the total work force.
- The number of women in the work force has doubled from 18 million in 1950 to 36 million in 1974.
- 4.6 million women of minority races (49%) were in the labor force in 1974.
- The number and percentage of women in the labor force are projected by the Bureau of Labor Statistics to reach 41 million and 38 percent by 1985.

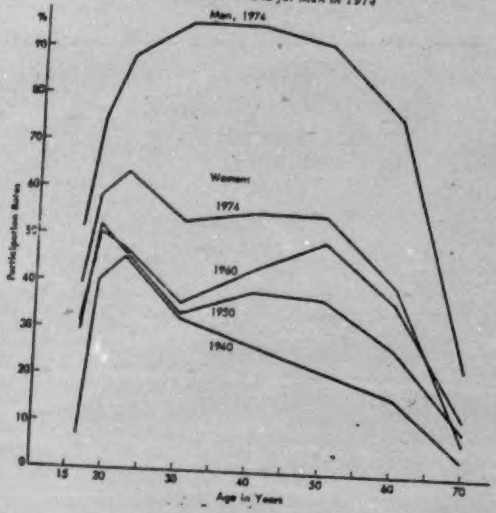
Women are entering the work force earlier.

LABOR FORCE PARTICIPATION RATES OF WOMEN, BY AGE GROUPS, SE-LECTED YEARS, UNITED STATES, 1950 TO 1974

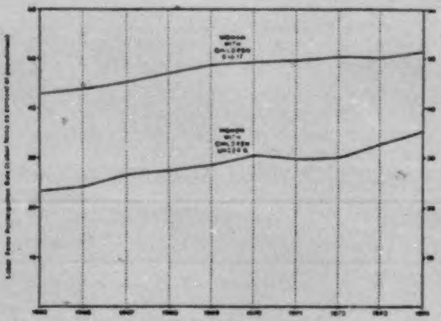
Age Group	*1950*	*1960*	*1970*	*1974*
16 and 17 years	30.1	29.1	34.9	[illegible]
18 and 19 years	51.3	51.1	53.7	58.
20 to 24 years	46.1	46.2	57.8	63.
25 to 34 years	34.0	36.0	45.0	52.
35 to 44 years	39.1	43.5	51.1	54.
45 to 54 years	38.0	49.8	54.4	54.
55 to 64 years	27.0	37.2	43.0	40.
65 years and over	9.7	10.8	9.7	8.
Total 16 years and over	33.9	37.8	43.4	45.

Women are staying in the work force longer.

Labor Force Participation Rates by Age for Women in 1940, 1950, 1960, and 1974—and for Men in 1974



Women work even with children at home. Having no children or older children are associated with higher rates of labor force participation for married women. More Black women are in the labor force than are white women.



Labor Force Participation of Married Women with Children, Husband Present, 1965 to 1974

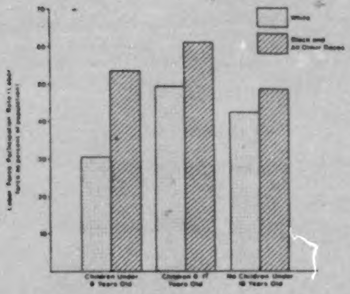


Figure 1.9 Labor Force Participation of Married Women With Children by Race, 1973

Working Mothers and Their Children

- 13.6 million mothers with children under 18 are in the labor force.
- 5.1 million have children under age 6.
- 26.8 million children have working mothers;

  20.7 million children aged 6-17 have working mothers;

  6.1 million children under 6 have working mothers; and

  4.6 million children had working mothers who were heads of families.
- The financial need in female-headed families, in the absence of a husband, is reflected in the relatively high rate of labor force participation:

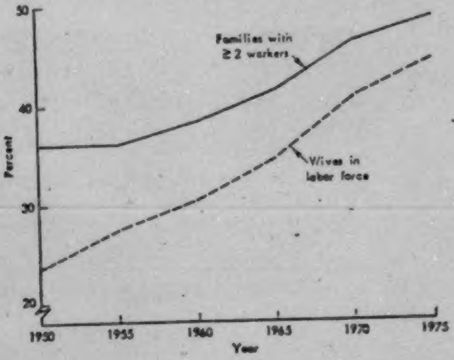
  54% for female-headed families; in contrast, the comparable participation rate is:

  45% for all women, and

  43% for women with husbands present.
- There are 6.8 million female-headed families.
- 54 percent of these female heads work.
- 10 percent of all working women are heads of families (3.7 million). Among these, 20 percent had incomes below 1973 poverty levels.

Dual Income Families

Dual income families are on the increase. Although women earn less than men (43% less), dual income families earn substantially above the average family income.



— Increase in percent of wives in labor force and percent of husband-wife families with 2 or more workers: 1950 - 1975

MEDIAN INCOME OF HUSBAND-WIFE FAMILIES IN 1974
BY NUMBER OF EARNERS AND RELATIONSHIP TO HUSBAND

Relationship to husband	Median family income			Number of husband-wife families (thousands)		
	1 earner	2 earners	3 earners or more	1 earner	2 earners	3 earners or more
Total	$11,953	$15,173	$20,073	15,637	19,673	7,190
Husband only	12,360			13,988		
Wife only	8,273			1,190		
Other relative only	11,833			451		
Husband and wife earners		14,883	21,063		16,693	3,827
Husband and others, not wife		17,335	23,915		2,676	1,383
Husband not an earner		11,633	15,636		304	121

33

Women in the workforce may affect elementary and secondary education in the following ways:

1. Curriculum
   - Career planning and overcoming the stylized gender role associated with occupational choice, job counselling resocialization to new work-sex roles are highly socially and economically significant opportunites for schools.
   - New role models for girls will directly and indirectly reinforce the demand for work, career, and vocationally-oriented curriculum material and counseling.
   - Since the age of marriage is generally being deferred and is accompanied by earlier entry into the work force, curriculum material focusing around independent living, the single state, as well as guidance, counseling, and training in financial managment and personal affairs is quite appropriate.
   - For those in the lowest occupational strata, particularly those burdened by small children and/or single parenthood, education especially focused on improving one's economic status through continuation course certification and specially tailored high school programs would have enormous personal as well as social and economic benefit.

- The reduced time available for parenting, in dual working families, and especially in families with a single working head, may create the latent if not overt demand for new school services particularly dealing with those functions historically learned at home. Eating, drinking, dressing, social behavior, deportment, manners, self-control, as well as other compensatory functions from reduced adult care may comprise this agenda.

2. Day Care

Women entering the work force often have high demand for day care and nursery care for preschool and young school children. As this becomes a more generally pressing demand, the schools are a logical place to look for this service. For children roughly aged 7 to 13, the school day is not quite long enough to accommodate the needs of single-parent working households. There are efforts in some communities to extend the length of afternoon care through collateral services. These do not necessarily extend the educational school day, but are extending the use of education facilities. As a rough estimate, 15 percent of a random school population in this age group can be usefully served by extending facilities from 3 p.m. to 6 p.m. For mothers with younger children, the need for care and maintenance for longer periods (effectively extended day care) suggests—in view of underuse of schools and surplus teacher capacity—the possibility of extending school functions into those areas. Administratively and from the point of view of surplus teachers, teachers' unions, and meeting community needs, this option seems quite attractive. However, there are data from the social psychological literature on the relationship between a child's intellectual performance and extended exposure to other children which suggest adverse effects on mental development.

These are, at least, cautionaries.

3. Dual Income Families

Dual income families, especially in middle-class managerial and professional households, imply significantly more discretionary money which may lead such families—white and minority--to send their children to private schools or to relocate their residence outside of central cities.

4. Volunteerism

Fewer women will have time for voluntary services in the schools. At the same time, there may be an increased demand for the kinds of services that volunteers can perform well. This implies a decline in services offered or else greater demands for paid staff.

5. Fertility

Since increased participation in the workforce is associated with smaller numbers of children, this may tend to further depress or maintain low fertility.

Immigrants and Non-English Speaking Students

Since immigrants, to a very large extent, settle in metropolitan areas and more specifically in inner cities, continuing immigration will provide a chronic source of stress for big city school systems:

Some Facts

- Approximately 25 percent of the annual population increase in the United States is due to immigration.
- Roughly 400,000 persons are admitted to the United States each year. About 36 percent of these are under 20 years old, and are thus candidates for direct or early entry into schools.
- More than half of the immigrants of school age in 1975 came from Spanish speaking countries--Mexico, South America, the Philippines, or Spain.

- In 1975 of the of the 386,194 legal immigrants:
  - 34% were located in the 10 largest U.S. metropolitan areas.
  - 37% were located in the 15 largest areas.
  - 45% were located in cities with a population greater than one million.

Spanish is the most common non-English language spoken in U.S. households:

Household Languages of the Population: July 1975

Language spoken in households	Total population, 4 years old and over	School-age population, 4 to 25 years old
Total	196,796,000	83,150,000
English only	167,665,000	71,404,000
Non-English as usual or other language	25,347,000	10,639,000
Spanish	9,904,000	5,162,000
French	2,259,000	967,000
German	2,269,000	794,000
Greek	484,000	189,000
Italian	2,836,000	952,000
Portuguese	349,000	117,000
Chinese	534,000	219,000
Filipino	377,000	174,000
Japanese	524,000	213,000
Korean	246,000	107,000
Other	5,559,000	1,741,000
Not reported	3,784,000	1,108,000

Immigrants tax the urban public school system.

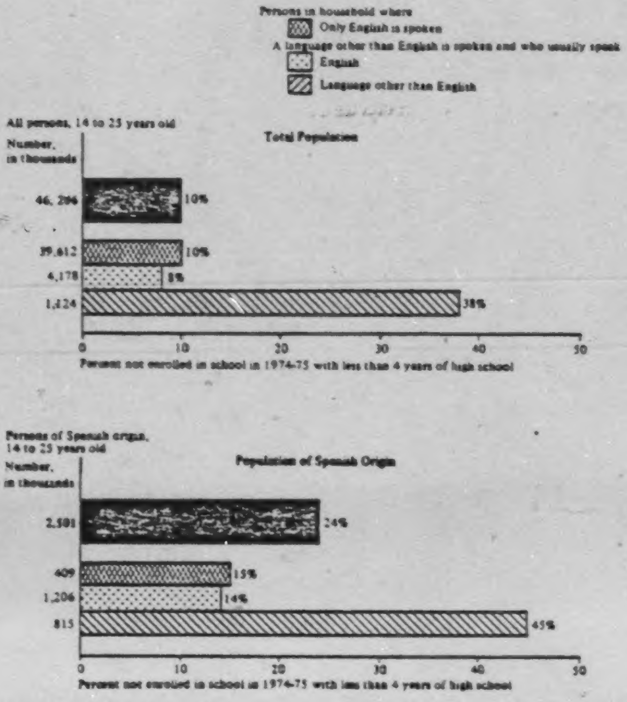
IMMIGRATION PATTERNS TO LARGEST U. S. CITIES

City	Total Population	(1975) Number of Immigrants
New York	9,973,577	73,630
Los Angeles-Long Beach	7,032,075	19,328
Chicago	6,988,947	17,083
Philadelphia	4,817,914	2,954
Detroit	4,431,390	2,754
San Fran.-Oakland	3,109,519	9,887
Washington, D.C.	2,908,801	2,349
Boston	2,899,101	1,380
St. Louis	2,410,163	830
Pittsburg	2,401,245	701
		131,296
Dallas-Ft. Worth	2,377,979	2,209
Baltimore	2,070,670	1,796
Cleveland	2,064,194	1,226
Newark	2,054,928	3,278
Houston	1,999,316	4,059
		12,568
		131,296
		12,568
		143,864 Total Number Immigrants for 15 largest metro areas.

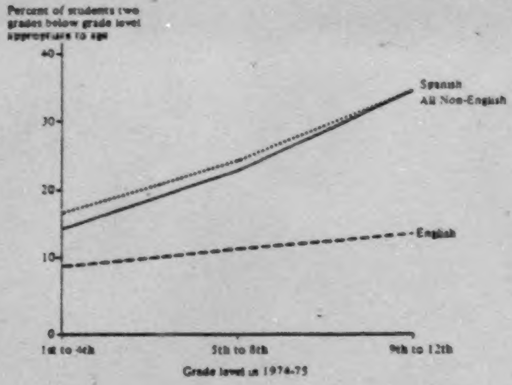
High dropout rates and enrollment below modal grade for students are strongly associated with foreign language backgrounds. By grade 12, 35 percent of non-English speaking school age children are two grades below their contemporaries.

Figure 53

High School Dropouts, 14 to 25 Years Old by Language Characteristics



Students Two Grades Below Modal Grade, by Household Language

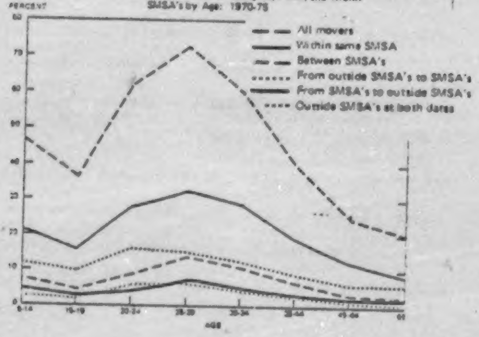


- The relationships between immigration, foreign language, and educational success give high priority to questions of the role, function, and style of bilingual education--what it accomplishes, and what the opportunity costs are, i.e., what the student does not get at the price of bilingual teaching.
- If the bilingual education of students whose primary language is not English, particularly in big cities, overstresses the system so that the job is done badly, the level of education of English-speaking students may also be reduced, further accelerating the decline of the urban school systems.
- The continued immigration of foreign-born students will renew the kinds of cross cultural stressess associated with students who are hard to acculturate. This often results in delinquency and poor school performance, particularly for urban school systems.
- Changing the status of new, illegal immigrants might have an effect on school systems by promoting marriage and family formation, and thus a higher rate of entry of children into the school system. This will especially affect big city systems and the smaller communities in the Southwest and in California.

Local Mobility and Internal Migration

Local mobility and internal migration are perhaps the two most important factors producing state, regional, and local deviations from national demographic trends.

Percent of Population Moving To, From, and Within SMSA's by Age: 1970-75



Some Facts:

- o From 1970 to 1974, the population growth in rural areas was 5.6 percent. This is in contrast to 4 percent for the nation as a whole and 3.4 percent for metropolitan areas.
- o The same period saw a net out-migration of 1.8 million people from metropolitan to nonmetropolitan areas.
- o The 8 largest metropolitan areas experienced a net out-migration of 1.2 percent.
- o One-tenth of the nation's 265 standard metropolitan statistical areas are now losing

population. One out of every four Americans lives in a metropolitan area in decline.

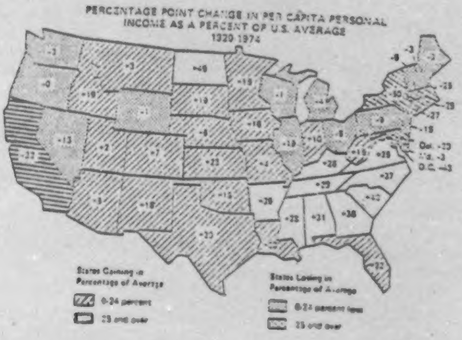
- In the 1970-74 period, populations of counties adjacent to metropolitan areas experienced a 6.2 percent increase.
- The growth rate of nonadjacent counties was also high—4.9 percent.
- Retirement counties and counties where senior state colleges are located lead the list of nonmetropolitan growth communities.

The management of these nonmetropolitan and small community growth centers from an educational point of view may present special problems because such growth is relatively unexpected. The tax base may be inadequate to meet the requirements. The amenities of the new in-migrants may be substantially at odds with those of the local people.

There Is Population Growth in Some Regions

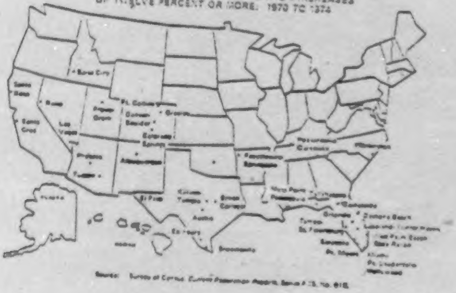
The South, Southwest, and Far West (often referred to as the "sunbelt") have experienced population growth in recent decades. While some of this growth is caused by individual migration, it is perhaps more basically attributable to the movement of industry to previously relatively unindustrialized areas.

PERCENTAGE POINT CHANGE IN PER CAPITA PERSONAL INCOME AS A PERCENT OF U.S. AVERAGE 1929-1974


States Gaining in Percentage of Average
0-24 percent
25 and over
States Losing in Percentage of Average
0-24 percent less
25 and over
Del. -23
Md. -3
D.C. -43

Source: Advisory Commission on Intergovernmental Relations, 1976.

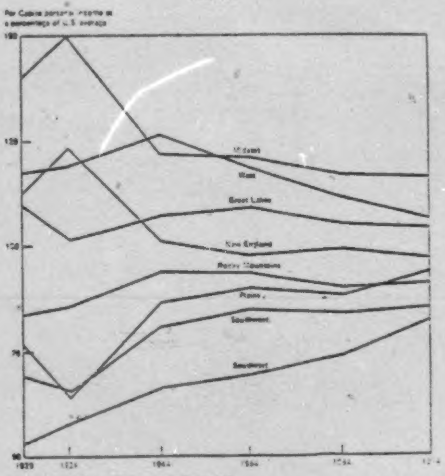
METROPOLITAN AREAS WITH POPULATION INCREASES OF TWELVE PERCENT OR MORE: 1970 TO 1974


Boise City
Santa Rosa
Reno
Santa Cruz
Las Vegas
Provo Orem
Ft. Collins
Greeley
Boulder
Colorado Springs
Albuquerque
Tucson
El Paso
Killeen Temple
Bryan College
Austin
Brownsville
Fayetteville Springdale
Orlando
Daytona Beach
Tampa
St. Petersburg
Sarasota
Ft. Myers
West Palm Beach
Boca Raton
Ft. Lauderdale
Hollywood

Source: Bureau of Census, Current Population Reports, Series P-25, no. 618.

Regional income equalization which has been a trend since at least 1929 may reduce interregional educational differences in terms of cost and quality of education.

CLOSING THE REGIONAL INCOME GAP
(1929-1974)



Source: Advisory Commission on Intergovernmental Relations, [illegible]

The trend toward equivalent income levels in different regions may effectively undercut regional disparities of funds available per child on a state basis.

Boom towns, particularly in energy rich regions in the West and Appalachia will almost certainly create major planning needs and local dislocations of educational systems if those plans are not adequate.

Where?

-Kentucky
-So. Illinois
-Wymoning
-North Dakota
-Colorado
-Montana

Large, central cities are becoming increasingly the centers of Black and other poor and related poor minority group populations. That is associated with white and more importantly middle-class dissatisfaction, the origins to which are only poorly understood. In any case in the face of increasing dissatisfaction, there are only a small number of options open to the middle class:

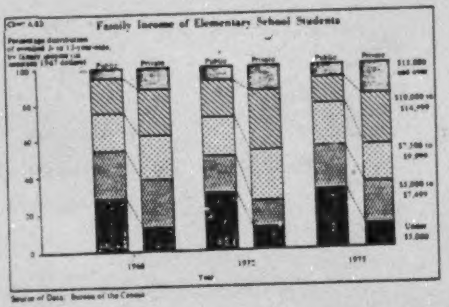
- o Change of residence;
- o Withdrawal of pupil to either
  - private school or
  - parochial school
- o Early graduation and entry into college which incidentally may stimulate certification processes to establish competence; and
- o tracking

The sum of all of these processes is resegregation.

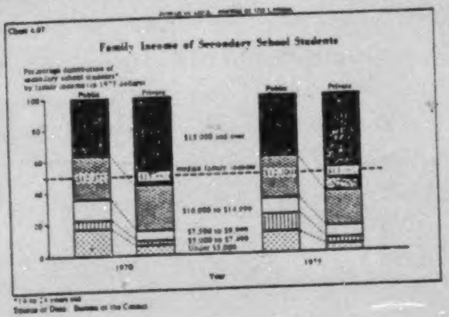
This partitioning of populations is further exacerbated by the movement of immigrant population into the large cities as discussed earlier.

Stabilizing and reversing these trends may be a major educational policy need which is now relatively latent but may become increasingly pressing.

Withdrawal to Private Schools is Associated with Income



Source of Data: Bureau of the Census



*14 to 34 years old
Source of Data: Bureau of the Census

Teenage Childbearing

The only group in the United States now undergoing significant expansion in birth rates are females under age 15.

Some Facts

- In 1975 of the 3,144,198 live births, 12,642 were born to women under 15 years of age.
- 220,270 babies were born to women 15-17 years of age.
- Of these children born to the 15 and under mothers, 5,073 were born to white mothers and 7,315 to Black mothers.

The disastrous effects of childbearing by very young mothers is brought out in a study of 5,000 pregnancies conducted over the past 15 years by Dr. Janet Hardy, Professor of Pediatrics and Professor of Public Health Administration at the John Hopkins University. Among the infants studied, 550 were born to girls 16 years of age or younger. The children are all now 10 to 16. Pregnancy complications or later developments are shown below:

Item	Percent Occurence
Prior Pregnancy	10
Toxemia of Pregnancy	37
Perinatal Death	4
Prematurity (birth weight below 5½ pounds)	22
Neurological Status Other Than Normal at 12 Months	10
IQ of the Child at 4 Years	
70 and below	11 (Gen. pop. 2.6%)
110 and above	5 (Gen. pop. 25%)
IQ of the Child at 7 years	
70 and below	5.3 (Gen. pop. 2.2%)
110 and above	2.8 (Gen. pop. 25%)

This situation has several implications for the educational system. Young motherhood is associated with a variety of congenital defects in the child, interfers with the ability of the mother to continue her education, and carries a higher risk of having a defective child. The negative consequences of these implications may be self-reinforcing and accrue directly to the school system.

The junior high school has never adequately come to grips with the onset of puberty in terms of curricula, services or goals. Especially critical is the increasing rate of early sexual activity among boys and girls of junior high school and high school age, creating both immediate and long-term social and educational problems and needs associated with adolescent childbearing.

Decline in Enrollment

Decline is too simple a concept. Shifting school populations, local growth, and local decline are more appropriate planning concepts.

The national decline in enrollments does not imply universal distress, nor are they a uniform phenomenon. They are occurring predominately in Midwest, Mid-Atlantic, and Pacific states, while the South and Southwest are enjoying a boom. To complicate matters further, both enrollment declines and increases occur in the same state with different very small districts experiencing both shrinking and growing student populations. Especially hard hit will be big cities already in great fiscal distress.

Decline has also been the basis for financial reform in Iowa, for example.

Some Facts:

- o Approximately three-fourths of the states (37 states) have experienced enrollment declines since 1970.
- · California, alone, has lost 239,000 students since 1970 and Ohio has lost 112,000.
- o Sixteen states have lost at least 4 percent of their students, with Kansas losing approximately 13 percent and North Dakota 10 percent.

- Twelve states have experienced increasing enrollment during the past five years with Arizona (8.9 percent) and Florida (8.1 percent) leading the list.

A sense of the details and complexity of decline and shifting school populations can be seen in the attached Figures 4, prepared for the Commission on Minnesota's Future. By 1990, Minneapolis and St. Paul will have only 60 to 80 percent of the 1975 school population of the Twin Cities metropolitan area. The Minneapolis-St. Paul suburb will undergo a mixed pattern of decline to the 1975 level in some counties while experiencing growth in four other counties. In the less populated, rural areas of Minnesota, the pattern indicates a substantial decline to 60 percent or less of the present school population.

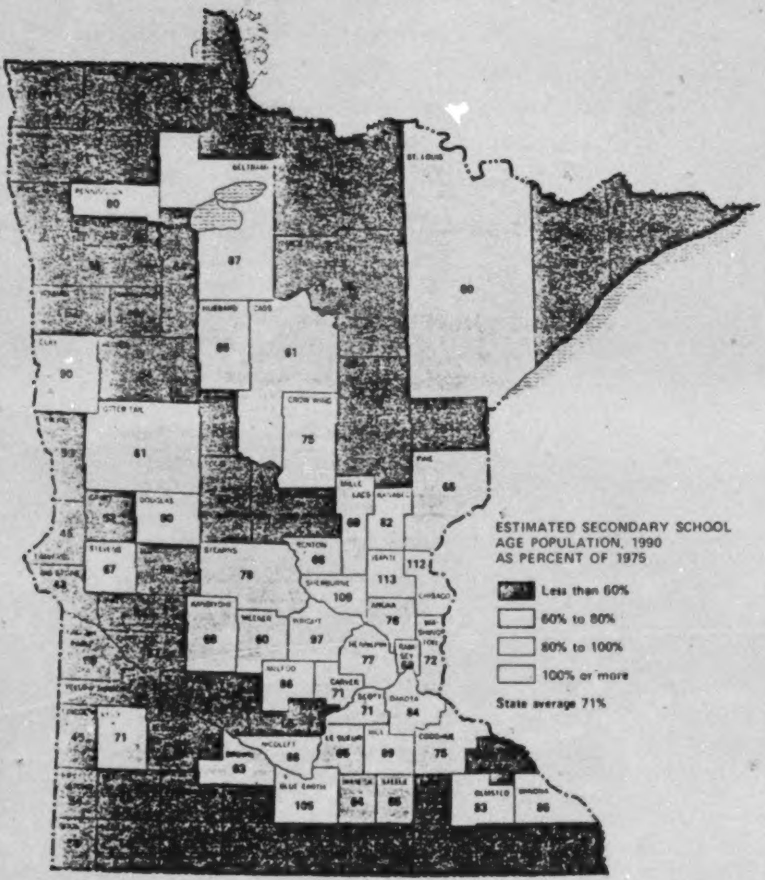
Big cities and small communities are hardest hit by declining enrollments.

Some Facts

- In the period of 1968 to 1974, those big city school systems increased in an average of 95 percent in minority student enrollment. As of 1974, the average student minority enrollment was 67.1 percent (Table 2).
- The 27 largest cities in the country peaked in their total school enrollment in 1970-71 at six million. In 1975-76 enrollment declined to the level of 1962-63 (Figure 5).

FIGURE 4

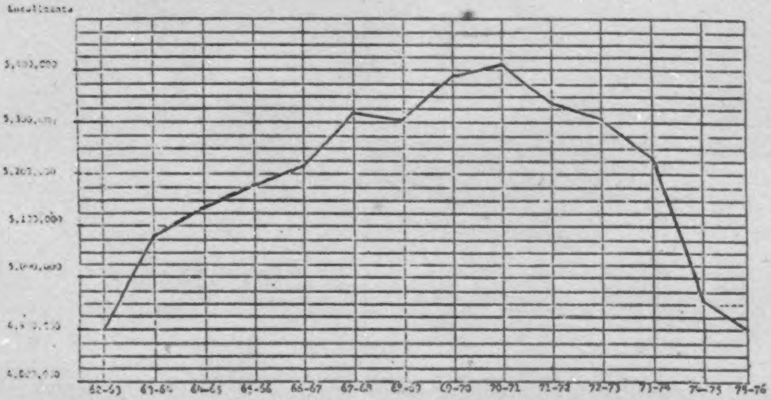
SCHOOL AGE POPULATION, 1990


ESTIMATED SECONDARY SCHOOL AGE POPULATION, 1990 AS PERCENT OF 1975
Less than 60%
60% to 80%
80% to 100%
100% or more
State average 71%
PENNINGTON 80
BELTRAMI 87
ST. LOUIS 80
CLAY 90
HUBBARD 86
CASS 81
CROW WING 75
OTTER TAIL 81
DOUGLAS 80
PINE 66
MILLE LACS 80
KANABEC 82
STEVENS 67
STEARNS 79
BENTON 86
ISANTI 113
CHISAGO 112
SHERBURNE 109
ANOKA 76
KANDIYOHI 66
MEEKER 80
WRIGHT 97
HENNEPIN 77
RAMSEY 64
WASHINGTON 72
MCLEOD 86
CARVER 71
SCOTT 71
DAKOTA 84
LINCOLN 71
NICOLLET 86
LE SUEUR 85
RICE 89
GOODHUE 75
BROWN 83
BLUE EARTH 105
WASECA 84
STEELE 85
OLMSTED 83
WINONA 86

SOURCE: MINNESOTA STATE DEMOGRAPHER

FIGURE 5

ENROLLMENTS IN THE TWENTY-SEVEN GREAT CITIES



	% Minority Pop. in Total City Population-1970	% Minority Student Enrollment - Fall 1974	City Minority Pop. as a % of State Minority Population-1970	City Minority Student Enrollment as a % of State Minority Student Enrollment - Fall 1972	% Minority Pop. in Total Suburban (SMSA-City) Pop.-1970
Atlanta	51.89	84.9	21.32	21.15	6.65
Baltimore	47.02	70.4	58.55	53.49	6.47
Boston	17.41	47.7	55.01	69.55	1.63
Buffalo	21.36	47.7	4.10	3.17	2.25
Chicago	34.47	72.5	76.60	74.41	4.07
Cleveland	38.99	60.6	29.14	27.74	3.78
Dade County	23.42	54.0	7.33	29.22	12.61
Dallas	25.84	55.5	14.74	8.18	5.80
Denver	10.98	45.6	59.52	39.43	1.46
Detroit	44.50	73.6	64.57	56.45	4.00
Long Beach	9.24	26.2	1.35	1.03	14.91
Los Angeles	22.01	56.8	29.31	26.04	5.07
Memphis	39.16	69.9	38.79	42.45	32.18
Milwaukee	15.57	38.4	70.37	70.93	.57
Minneapolis	6.44	19.1	40.60	38.20	1.58
Nashville	19.91	28.1	14.17	12.67	9.07
New Orleans	45.51	80.8	24.55	22.73	14.02
New York City	23.38	65.6	76.83	79.27	6.43
Oakland	40.04	78.2	6.75	3.91	14.07
Philadelphia	34.37	66.8	63.43	63.59	7.07
Pittsburgh	20.73	43.4	10.21	10.26	6.22
Portland	7.85	15.6	50.56	48.39	1.32
St. Louis	41.34	70.8	51.55	46.42	7.50
San Diego	11.09	30.3	3.52	2.61	4.35
San Francisco	28.57	69.2	9.33	4.45	13.79
Toledo	14.25	33.6	5.45	6.03	1.66
Washington, D.C.	72.33	96.7	-----	100.00	8.97

- The percent of students from impoverished families (1970) in these cities is far in excess of the percent of families in poverty, 33.4% vs. 11.6%.
- The 187 largest school districts provide schooling for some 27,3 percent of all school children.

With regard to growth areas, it should be noted that:

- The movement of urban populations into rural areas is likely to create several stresses on present rural systems. One example is a greater demand for educational amenities to which the former urban dweller is accustomed.
- Any upsurge of population is likely to find its initial growth in the kindergarten and lower grades. This should provide sufficient lead time--five years--between any upsurge in births and entry into school to allow for effective planning.

Response to Decline

Aggregate figures tend to hide the thorniest policy issues, namely, the highly uneven distribution of these shifts at the regional, state, and local level. In any case, in the face of declining enrollment, there are only three general strategies available to school administrators:

1. Contract in size by:

   Consolidation of schools,
   Staff Cutback, and/or
   Cuts in so called frills such as sports, music, and art.

2. Expand services to present clientele through:

   o After school care.

   o Personal development.

   o Curriculum expansion.

   o Smaller classes and more individualized attention (This could include reducing the size of individual school populations without closing the physical facilities.)

   o Health services.

3. Expand services to new clientele, such as:

   o Preschool day care.

   o Health services, such as immunization.

   o Community center functions.

   o Adult learning needs, such as

     - credentials
     - career skills
     - hobbies and recreation
     - other training of economic value, such as car and home repair.

There is much to say in favor of each of these options and many questions to raise about their appropriateness, in general, or in any particular context.

Each of these options is being exercised. The most significant implications for education are in the expansion to new clienteles and the extension of services for present clienteles.

- At the high school level this involves services to adults.
- The key new market for the elementary and junior high school systems may be the further extension into nursery school and day care services and the forward extension to provide longer time attention to the child during the day (from 3:30 p.m. to 6:00 p.m.). Both markets reflect the needs of working mothers.

Some Policy Action Implications of Demographic Trends

The highest payoff actions meeting the clearest needs are those involving the generation and distribution of knowledge about demographic trends to relevant state and local government planners. This generation and distribution could flow out of research, monitoring, surveys, data gathering, and to some extent from demonstrations.

Familiarity with local circumstances can play a major part in whether a given forecast is policy useful or policy irrelevant. In general, there is not enough expertise now at the state and local levels to meet this need.

The second major action area, therefore, is building capacity at the state and local level for more effective and timely planning in response to unfolding demographic trends. Building analytical capabilities and an information base focused on more fine-grain, detailed, and local analysis is needed.

A. Generation and Delivery of Knowledge and Information

- The monitoring of specific population trends and the presentation of that information in a more educational issue-oriented mode dealing with birth, fertility, internal migration, immigration and demographic data is one key to better planning.
- The Census Bureau's state level projections are about ten years old. There is substantial opportunity in 1980 to generate and present more salient data. There is the further opportunity to modify the content of the data collection for the 1985 census.
- It may be worthwhile to innovate in terms of census collection, by going to much more sophisticated sampling techniques in which just a tiny fraction of the total population is sampled in depth, by carefully selected modes to give highly reliable data. Obtaining local estimates for small areas or sparsely populared areas would present special technical problems, using sampling techniques.
- The collection of appropriate, timely data on adult needs and activities is of primary importance in setting policy at local levels. Backing up better understanding of this potential

market could be a series of demonstration and study projects to test and identify effective community adult education delivery systems.

- Assuming that extended day care, nursery care, and after school services are other plausible avenues for expansion, data are insufficient on the needs of that clientele, the criteria for selection, kind of services appropriate at different direct or indirect costs, and criteria and constraints on the user, usually the working mother.
- Paralleling this is the pressing need for more salient research on the effects of alternative caring systems on children as a function of their age, the socio-economic status of their family, the number of adults in the household, cultural background, and so forth.
- Information needs to be directed at the parents and citizens outside the school system on how to set up, run and select nursery and day care programs.
- The information base is quite inadequate with regard to the influence of a number of demographic factors on the school child and, hence, on curriculum, service, and scheduling needs of schools. These include factors such as being a member of a single parent family, or a migrant or immigrant family. These merit more intense research and evaluation.

- Specific detailed case examples of satisfactory and unsatisfactory responses of school districts of different sorts--urban, rural, large community, or small community could be developed through short-term, highly focused research, appropriately packaged and delivered to state and local planning officials,and other interested parties.
- Along that same line, extensive funds are now being expended on developing demographic data for energy, transportation, urban planning, and so on. A review of the applicability of these data bases to education planning is appropriate since marginal expenditure may yield substantial benefits.
- Population models and "how to do it" packages, useable at varying levels of government, could be developed, demonstrated, and disseminated by Federal agencies as a very useful complement to the program suggested above.
- It would be useful if one of the key Federal agencies concerned with population and education could organize a demographic conference focused on the state of the art at the state and local level. From this, one could determine explicit positive measures that could be taken in the long and short-run to enhance the capability to use demographic information for educational policy planning.
- Much of the suggested work in this area could be accommodated by the Bureau of the Census expansion of the proposed monthly state-by-state survey and economic surveys. Other projects would usefully fit in with the developing programs at the National Institute of Education.

B. Building State and Local Capacity

The steady decline in school populations, while predictable at the national level, may have little bearing on the situation faced by particular state and local planners, since the details of internal mobility and migration and the special needs of subpopulations create local or regional shifts within the school system which may exaggerate or counter the general downward trends for the nation. The dominant policy actions are at the city, metropolitan, district, state, and regional level.

- Demographic analysis capabilities are inadequatic at the state and local level for understanding and dealing with the major demographic trends. Limitations of data restrict demographic analysis and, especially, forecasting at the state and local level.
- The promotion of the organization of policy-focused demographic data at the state level is crucial. The general extension of state demographic services to local governments is highly desirable. One possible model would involve the creation of centralized individual forecasts made at the local levels.
- The promotion of the organization of policy focused demographic data at the state level is crucial. The general extension of state demographic services to local governments is highly desirable. One possible model would involve the creation of some centralized agency for demographic services at the state level to supply basic data and to collate individual forecasts made at the local levels.

- In some areas of the country, where relatively sparsely populated but economically integrated land units overlap state boundaries, the promotion of such activities on a regional multi-state basis would be useful.

In summary, the principal Federal actions appropo of demographic trends are: first, to stimulate the state, local, and regional capacity to use such data in their planning; and secondly, to marshal Federal resources to provide a better information and knowledge base for such projections.

STATEMENT OF JOSEPH COATES, ASSISTANT TO THE DIRECTOR, OFFICE OF TECHNOLOGY ASSESSMENT

Mr. COATES. It is a pleasure to be with you today to report on the exploratory task we undertook at the request of the chairman on demographic trends and how they may influence elementary and secondary education. I would like to talk from my charts if I may. [Chart]

The major decline in school age population is common knowledge.

This figure illustrates the basic decline over a 5 year interval. One line shows the population with a relative baby bulge back in 1970. As is the case with these distributions, population in general declines as the population grows older.

When we look 5 years later, 1975, the blue line, we find is this bulge is displaced forward 5 years. But note that it hasn't been replaced by continual high birth rate. In other words, the decline in the birth rate is shown here which ultimately in some future years will cut down on the supply of school children into the elementary and ultimately into the secondary school systems.

For the past 18 years there has been a steady decline in birth rates so that about 28 percent fewer children are being born now (3.1 million) compared to then (4.3 million).

While this is a basic general, nationwide trend, the fact is that there are a number of other demographic trends which are much more important when one gets down to the state, local, and regional planning levels that most directly deals with elementary and secondary education. [Chart]

I would like to briefly indicate what these are and come back to them in some detail.

The changing nature of the family as embodied in the rates of divorce, the rates of deferred marriage, deferred childbearing, rates of illegitimacy, rates of single, particularly female-headed households is changing both the demands for services and implicitly, and ultimately explicitly, changing demands on curricula.

The entry of women into the work force is a major factor influencing elementary and secondary education in at least three ways.

First, the shifting roles that women assume as they enter the work force creates a latent and then ultimately an overt demand for curriculum changes that prepare women for their entry. Secondly, it tends to extend education. Thirdly, it tends to create a demand for services for the children of working mothers.

A third factor is immigration. Immigration now accounts for about 25 percent of the net population growth in the United States. Immigrants tend to be city dwellers. Roughly half of them set their residences in cities over one million and about 37 percent of them settle in the 15 largest cities.

This particularly education-demanding, school stressing, population is settling into those areas of the country already under severe educational stress—the cities.

Internal migration and local mobiliy of population is perhaps the single most important pair of factors upsetting the ability to make effective long-range forecasts on a local and regional basis. [Chart.]

I would like to now turn back to the basic population forecast. The Census Bureau has projected three standard population forecasts for the future. On this chart, we see the school-age population, five to 13, and 14 to 17, from 1975 to 1995. This is the population in millions. School populations based on children now alive can be forecast with extreme reliability. One can make therefore a very highly reliable forecast of the steady decline in elementary school children out through early 1980.

Similarly, very highly reliable forecasts in declining high school enrollment out to the late 1980s.

The three lines illustrate the future population depending upon the assumption one makes about fertility rates. The population replacement rate is about 2.1 children per family. This is reflected in the red line. This is the rate which yields a stable population. A credible high rate of population is 2.7 children per family and a credible low level is 1.7. You can see by the time you reach 1995 that the gap between the highest and lowest of these credible predictions is on the order of fifteen million children.

We find there is a fairly broad consensus among democracies, however, that this red line is the most likely case and the one one can count on it with some reliability.

In any case, should fertility rates shift, those shifts will be apparent some five years before the child enters elementary school and some 14 years before he enters high school. Should there be any surprises in this future population trend on a national level, it would be fairly easy to accommodate this in planning. [Chart.]

What I would like to turn to some of the more detailed demographic factors and how they may be affecting the elementary and secondary systems.

I think that the family is perhaps the most significant factor to consider. If one considers a child born today or born last year, the chances are almost 50-50 that by the time hs is 18, he will be living in a family with only one parent for some significant length of time.

The growth of the single-parent family is a factor having a profound influence on service demands and I believe on curriculum demands, making it one of the major demographic facts affecting schools.

The proportion of children now living with both parents is about 80 percent and this is a decline since 1960 from about 88 percent. There is every reason to believe that that pattern will continue.

The second key factor about this phenomenon of the single-parent family is that the single-parent familyhood is a virtual guarantee of financial poverty. If we look here at median family income for male-headed families or male headed with wife present, the incomes are roughly the same for white families. A median income of approximately $13,000.

When one looks at female-headed families the decline in income is almost 50 percent, down roughly to the $7,000 level. When one makes a black/white comparison, one finds what is usually the case, that the situation is even worse for blacks compared to whites in all categories.

This table shows similar data displayed somewhat differently. Instead of looking at median income, we are looking at average or mean income here. If we take the age group 25 to 44 the income of male-headed households, is approximtaely $12,000. Male-headed, with wife present households, the family, about $15,000. But for female-headed households, the mean income is approximately $6,000. This changing pattern in families is creating impoverished families, driving women into the labor force and presumably will be creating in all classes—not just the traditionally poor, but the middle-class—families in poverty with the associated demands on schools. [Chart.]

This chart suggests some of the shifting patterns in marriage, the first-marriage rate, remarriage rate and divorce rate. All of thse peaked immediately after World War II, with the notable exception of divorce rates, the major factors leading to female-headed household phenomenon, the other rates of marriage and remarriage are in decline. [Chart.]

Another factor relating to marriage and the family which can influence schools is the fact that marriage is being deferred. There is no evidence that marriage is going out of style, but very strong evidence that marriage is being put off. If we compare 1960 to 1970 and look at 18-year-old women, in 1960, 24 percent of them were married. In 1970, 18 percent were married.

If we look six years later at the age group aged 24, in 1960, 84 percent were married. In 1970, 77 percent were married.

This phenomenon is generally agreed to be one of deferred marriage, not turning away from marriage. In that period of deferred marriage women are by and large entering the work force, or continuing their education, and that continuing education implies entry into the work force. [Chart.]

A slightly more complex picture of the age pattern relation of marrige is shown here. What we have are the percent of ever-married women, versus age of those women. If we look at women born 1905 to 1914, the green line, what we find is that by about age 17 perhaps 12 percent of them were married. The marriage rates continued to rise fairly steadily and peaked at 30, with approximately 82 percent of them married.

If we look at women born 1935 to 1939, we find two phenomenon occurring. They are marrying earlier to a greater percent and the total number married is increased. So, by the time one reaches age 18, aproximately 30 percent of those women were married and ultimtely nearly all of them were married.

Turning to the most recent age group of women who are now in the marrying age group, we find the following: The percentage entering into marriage, who were born 1950-1951, is displaced to the right. Fewer are marrying so young, but the slope of the curve, the rise in the curve is roughly the same as for the 1935-1939 group. This again makes the basic point that marriage is being deferred but both the objective data and the survey data show more women to be married than in the past, but they plan to be married later. [Chart.]

Another factor influencing elementary and secondary schools is the entry of women into the work force. This is perhaps the demographic trend most profoundly influencing curriculum, services, the life of the child and on the whole family structure.

If we take as a base case the situation for men in 1974 and we look at the percentage of men participating in the work force as a function of their age, we find that men begin to enter the work force somewhere in their teens so that roughly by age 18 about 55 per cent of males are in the work force. As they complete schooling or complete college, the rate rises to over 90 percent in the early twenties. It continues to rise to almost one hundred percent, levels off and then, as one moves into the late middle-age, retirement age, there is a sharp decline.

Women's participation in the work force, presents an interesting historical pattern. Going back to 1940, women tended to enter the work force before they were 20. By their early twenties perhaps 45 percent were participating. As they entered the childbearing years, however, participation fell off and continued to fall off through retirement.

Comparing the experience of 1940, with that of '50, '60 and '74 and shows the following interesting trend. More women are entering the work force. They are entering earlier and they are staying through the childbearing years.

They are not dropping out at the same rate and we don't have this steady uniform decline in work force participation. Economic need is one factor but education itself is another factor in promoting their work force participation. [Chart.]

If we look at work force participation in relation to the number of children in the family, the data is somewhat obvious and it is the strength of the information that is important.

Families with no children tend to have high labor force participation. Those with older children tend to have high labor force participation. What is surprising is even families with children under six have a labor force praticipation rate for females of about 30 percent. If one compares whites with blacks as one might expect the labor force participation is greater for non-white families in all categories. What one could conclude out of this is:

First, it is those families which are the poorest, those with the fewest financial resources forced to participate to the greatest extent.

Second, the families in all categories are participating at a greater rate. [Chart.]

Another phenomenon associated with working wives is the growth of the dual income families. While women in general are only paid about 57 per cent as much as men, and this tends to hold across all occupational categories, when there are two workers in the family, income goes up. Now, the percent of families with two workers has risen since 1950 when about 37 percent were two-worker families, to about 50 per cent in 1975. One can see that this is due to the increased participation of women in the work force.

The effects on schools of women in the work force, I think, are going to be quite numerous. First, there will be a decline in volunteerism. At the time the school system is experiencing demands for volunteers, fewer women will be available.

This is nicely illustrated by the experience of the League of Women Voters which has, of course, nothing to do with education. Much of the envelope-licking and stuffing that was done with free labor now has to be done on a "fee for service" basis because so many of its members have moved into the work force.

A second factor is that the decision to participate in the work force is associated with an anticipated decline in the number of children that the family will bear. Furthermore, education, which is rising in all sectors, is associated with participation in the work force, so we have the interesting cycle of education promoting work, work promoting decline in fertility and declining fertility, of course, increasing the problem of elementary and secondary schools.

I think, however, there are other factors worth noting. The dual income family having more discretionary income has open to it the option of moving out of the public school system. I will present some data in a couple of minutes to suggest that this is a phenomenon which is occurring and which is a serious threat to the public school system in big cities. As the middle class-upper middle class income group moves out, we may be promoting a school system which will really be an underclass school system in the big cities. Another result of women entering into the work force is the problem of care for the young child and for the older child 7 to 13, the latch key child. The school day isn't long enough to accommodate the 7 to 13-year-old child who gets out of school at three to 3:30 and whose parent returns at 5:30 or 6:00.

The under-utilized school facilities is an attractive option for meeting this need.

The other big market resulting from women entering the work force is the need for care for children age six and under. Almost all the forces work to make this an attractive option for schools. Surplus facilities, surplus staff, surplus teachers, the demand on the part of parents and so on.

There is, however, a body of sociopsychological literature which raises very strong cautionaries about this being a sensible or clearly desirable path to follow. In sum that data suggests there ere adverse psychological effects on the relations of the child to adult values. But more importantly, children in conjunction with large numbers of other children for extended periods of time may suffer a reduced mental development.

These data can hardly be definitive at this point, but they seem to be so significant as to merit attention in any plan to deal with day care.

Let's turn now to another demographic factor influencing the elementary and secondary system and that is immigration. [Chart.]

As I mentioned, immigration accounts for about a quarter of the net population growth. Immigrants are by and large urban-oriented. Thirty-seven percent of them settled in the 15 largest cities. New York, for example, in 1975 acquired 74,000 immigrants; Los Angeles, 19,000; San Francisco, almost 10,000.

So an already-stressed urban school system is subject to further stress by these forces. [Chart.]

Let's look at the phenomenon associated with immigration and that is the language spoken by the child and the language spoken in the family and their relation to elementary and secondary school performance.

First, a sense of what those languages are. The principal non-English language spoken in the United States by people 4 years old and over is Spanish, spoken by almost ten million people. If we look at a narrower school age population of four to 25, about five million speak that as the language. [Chart.]

If one intends to relate high school dropout rates to language spoken, the following interesting relationship shows up. Where English is the language spoken, or English and some other non-English language is spoken, the dropout rate is about eight or ten percent. But, where non-English is the language spoken, the dropout rate rises to 38 percent.

If we take the specific population of Spanish origin, a similar situation holds except that it is worse. Where English is spoken, or English and some other language is spoken, the dropout rates are 14 to 15 percent, but where only Spanish is spoken, the dropout rate is 45 percent. [Chart.]

If we look at the students who are not up to standard performance as measured by the percent of students two or more grades below their age mode, what we find is that a fairly steady ten percent of English language-speaking students are two or more grades below most, but if we look at non-English-speaking students or Spanish-speaking students, we find this phenomenon.

In grades one through four approximately 17 percent of them are two grades below mode and by the time they reach the ninth to twelfth grades, something like 35 percent of them are two or more grades below mode.

The implication of this—it can only be an implication rather than a conclusion at this point—is quite significant when one couples this situation with the long term movement of American society to an information society. Approximately 55 percent of the work force is now in the information business. This raises a very important set of questions about the role, the function and the effectiveness of bilingual education. It raises a set of questions dealing with what bilingual education intended to accomplish from a social point of view, what it is intended to accomplish from a student perspective, and, finally, from the family perspective.

These data suggest that students in this situation may be precluded from getting their first foot up on the economic upward mobility ladder. [Chart.]

Let's turn to some other demographic trends and their effects on elementary and secondary. This chart shows the general movement of U.S. populations over a five-year interval from 1970 to 1975. As a rule of thumb, about 16 or 18 percent of U.S. population moves annually. Obviously, the group that is most mobile is that group from about 25 to 35. The top black line is the age distribution of all movers. But let's look at it in a little bit more detail. If we look at the movement from outside a standard metropolitan statistical area into the standard metropolitan statistical area, we find that movement rises to a peak about 24 or so. This is presumably the movement of people who find the city an attractive place. This is a long-term continuing American experience of people moving from non-metropolitan into metropolitan areas.

If we look now at the pattern of movement from an SMSA to outside the SMSA, what we is movement out at the childbearing period, ages 25-29 and 5-14. Apparently what is occurring—and this is only weak evidence—is that people are attracted to the city for work, for other opportunities; whatever brings them there, as they move into the childbearing years there is a tendency to move out. [Chart.]

Internal mobility and migration has had a number of effects on population. As I mentioned earlier, this is probably the pair of factors that are most perturbing to educational planning at the state and local level. One can see, for example, there is a continuing shifting in the per capita income and growth. The sun belt areas of the south, the southwest and the areas east of the Rockies are all undergoing economic growth at this time. A principal effect is the continuing equalization of regional income which has been a long-term phenomenon in the United States. [Chart.]

The regional income gap—if we look at 1929 and compare with 1974, it reveals very real convergence. In 1929 the range, the income range by region varied from regions with 150 percent above the national average to regions with income of about fifty percent of the national average. In 1974 this range had narrowed to about 125 percent and about 80 percent. Long-term equalization of regional income will have an effect presumably on the search for better schools, and on budgets available per pupil.

It might be noted in passing that in the last few years, notably in the last five years, we have had a tendency toward growth in non-metropolitan areas. The national growth rate has been about four percent. Non-metropolitan counties have grown about 5.6 percent. This redistribution of population is not just occurring on the perimeters of metropolitan areas, but it is also occurring in the areas not contiguous to the metropolis. It is principally occurring in retirement centers and in areas where there are state universities.

The redistribution of population will create a crucial problem for education planning in boom towns. One can reasonably anticipate, as we come to grips with the energy crisis, and open up coal resources in Wyoming, Dakota, Colorado and so on in the west and in Kentucky, southern Illinois in the east, that there will be surges of population for which the local communities will be either totally unprepared or totally unable to cope. [Chart.]

Let's turn now to the phenomenon associated with the income of the families of school students. I mentioned that immigration tends to affect cities differently. I mentioned that fact that the migration in and out of metropolitan and non-metropolitan areas is tending to have the effect of concentrating minority students in the big cities and tending to concentrate non-minority i.e. white students outside those big cities.

With the believed decline in urban systems, one could expect one of alternatives open to families is the movement to private schools.

Since putting a child in private school may be roughly the equivalent of maintaining an automobile each year, one would expect an income relationship.

In 1970, over half the children in private secondary schools come from families with incomes of over 15,000 a year. In 1975 we find a slight increase in this percentage.

If we go down to incomes in the range of $10,000 to $15,000 per year, we still find substantial participation in private schools in that income range. What this suggests is that for those families that have the financial option of going to private schools, that option is exercised. For families without that income option, the alternatives may be shift of residence. There may also be a drive toward acceleration of school, early graduation, graduation by credentials, or tracking. In any case, the net effect of all of these alternatives open to a white or middle class population dissatisfied with the school system in urban areas is resegregation. That raises the question as to whether this is a desirable social outcome. [Chart.]

I would like to turn more directly to the problem of declining enrollments. One can neatly capture the whole situation by looking at the state of Minnesota. The bulk of the area of Minnesota is an area of declining school enrollment. If we look at the official forecasts out to the year 1990, all of this relatively rural area of Minnesota can be expected to have less than sixty percent of the 1975 school enrollment. If we look at Minneapolis-St. Paul, similar phenomenon will occur there. The decline, however, will be between 60 percent and 80 percent. At the same time there is this major decline throughout the rural and nonmetropolitan areas and the central cities there are four counties with growth, basically suburban counties around Minneapolis and St. Paul. It is this complexity depending upon the demographic factors that I mentioned that raise one important conclusion. The principal need is to improve the facilities, the capabiliities to use demographic data at the state and local levels. [Chart.]

The impacts of shifting demography on the great cities can be seen very interestingly in this chart which shows the enrollment in the 27 largest cities from 1962 to 1976. It rose from about 4.9 million in '62, peaked out at 5.5 million in '70 and is now back in 1976 virtually to the 1962 level.

That phenomenon in itself would be interesting. What really aggravates that from the point of view of elementary and secondary school planning is the shifts in the school population that are left. [Chart.]

As one looks at a sample of those 27 cities, Atlanta, Chicago, Denver, Memphis, etcetera, one finds that the percent minority student school enrollment in almost every case is substantially above the percent minority population in the city. So, for example, Atlanta is 52 percent minority; the school system is 85 percent, in 1974.

Denver is 11 percent minority; the school system is 47 percent.

St. Louis is 41 percent minority; the school system is 70 percent minority.

One, I think, has to begin to consider what the implications of these population shifts are on the highly stressed urban school systems. [Chart.]

In general, we see three generic responses to declining enrollment. The first is to contract. Fewer classrooms, consolidations, fewer teachers, the cutback on the so-called frills.

The second alternative is to expand services to the present clientele and the third alternative is to expand services to a new clientele.

I think other people talking with you this morning will be talking further about the contraction. I would like to emphasize two of the new clientele available to the school system. I have already mentioned the situation with working mothers and the desire for extended child care and for extended care to young children. That presents a very real opportunity to the schools. But I believe it should be evaluated against the strong cautionary raised by a large body of data on the effects of children in conjunction with each other.

For the high schools the expanded clientele needing service and representing a substantial heightened demand are adults.

Adults have the need for credentials, career and work-oriented functions, hobbies and recreation. One could anticipate with the increase in cost of energy greater concern about conservation and so on. Hence, there will be a fourth category of economically-related needs,—How to repair your car, how to install conservation equipment in your home an so on, which represents a potentially expanded market for high schools.

I might mention, incidentally here, that a researcher in Canada named Tough has shown a large percentage of adults engaging in a number of self-learning ativities, perhaps in seven or eight a year, consuming often hundreds of hours of an individual's time. Whether that kind of self-learning experience can usefully be institutionalized in schools is, I think, an interesting question and a major opportunity. [Chart.]

I would like to sum up by highlighting two of the principal policy implications of these demographic trends.

First, the crucial need is to better understand the demographic trends at the state and local level.

Second, relating to that at the Federal level there is the need to provide better resources, better information, more sharply focused on educational policy, information of a demographic sort

In addition to that, there are a number of incidental points along the way to build this capability. For exampie the preparation of "How to do it" materials the presentation of examples of the successful management, the promotion of employment of demographers at state levels. Other considerations coming from the material presented is the need to better understand the latent market for adults, and to better understand the extended child care market.

Those are the high points of our preliminary exploration of demographic trends and their effects on elementary and secondary schools.

Mr. LeFante. Thank you very much, Mr. Coates, for a very excellent presentation.

You must have spent hours and hours of time on this.

Mr. Coates. In doing this, we enjoyed the support of an interagency task force from the Census Bureau, the National Institute of Education, the Department of Agriculture and the Center for Educational Statistics. They were the backbone of this enterprise.

Mr. LeFante. Thank you again. I can see where it took a large team to make such a presentation. I am sure it will be very helpful to us.

The next member of the panel to address us will be Mr. Doyle.

STATEMENT OF DENIS DOYLE, CHIEF, SCHOOL FINANCE AND ORGANIZATION DIVISION, NATIONAL INSTITUTE OF EDUCATION

Mr. DOYLE. Mr. Chairman and members of the committee, I thank you for your invitation asking me to appear before you on the policy implications of declining enrollments in America's elementary and secondary schools.

I am presenting my own views and not those of the administration or the National Institute of Education. My testimony draws from studies supported by NIE's School Finance and Organization Division, of which I am Chief. A short paper has been prepared for your review which has been made part of the record. Also you have just heard from Mr. Joseph Coates of the Office of Technology Assessment and received his paper which thoroughly describes the demographic aspects of this problem. I will restrict my remarks then to some of the more important policy questions uncovered by our research.

By way of background, I should mention that NIE's creation of a School Finance and Organization Division was in direct response to a congressional mandate of three years ago when, in the appropriations process NIE was instructed to undertake more "goal-oriented research . . ." such as work in the field of school finance.

In examining the set of questions surrounding school finance reform, we quickly discovered that declining enrollments were of major concern to educators and policy makers. In fact, declining enrollments were having a particularly strong impact on the financing and organization of large numbers of schools.

As you know, most state and Federal education finance arrangements are sensitive to pupil counts: as the number of pupils change, so do the number of dollars available for their education. So long as schools experienced growth, this linear relationship between students and income was generally acceptable to school committees and the schools they ran. As enrollment dropped, however, the public expected corresponding decreases in expenditures: this has not occurred and the slowness with which the expenditure curve declines is a major ingredient in the declining enrollment "problem."

If expenditures declined as rapidly as enrollments, it is unlikely that we would be here today: in short, the declining enrollment problem is in large measure one of resource allocation. As I will try to indicate, it presents both problems and opportunities.

Before proceeding with our policy observations, however, I would like to take one or two minutes to describe the scope of our research activities in this area. Approximately fourteen months ago we decided to embark on a systematic examination of the phenomenon of declining enrollment: it was clearly a pressing problem and one that merited attention.

In that period we have commissioned thirteen topical studies to explore the subject and provide comprehensive coverage of the issues.

1. "The Demographic Background to Changing Enrollments and School Needs," Russell G. Davis and Gary M. Lewis, Harvard University.
2. "Demography and Changing Enrollments," Harriett Fishlow, University of California at Berkeley.
3. "An Analysis of State School Finance Systems as Related to Declining Enrollments," Jack Leppert and Dorothy Routh, MGT, Inc.
4. "The Fiscal Impacts of Declining Enrollments; A Study of declining Enrollments in Four States - Michigan, Missouri, South Dakota and Washington," Alan Odden, Education Commission of the States.
5. "Declining Enrollment: The Cloud and Its Silver Lining," National Conference of State Legislatures: Legislators Education Action Project, Callahan and Wilken.
6. "Enrollment Decline: The Dilemma from the Superintendent's Chair," William F. Keough, Superintendent, New Bedford, Massachusetts.
7. "The Imperative of Leadership: A Report on Declining Enrollments," Robert J. Goettel, National Association of State Boards of Education.
8. "Declining Enrollment - A Conference Report," James A. Mecklenburger, National Association of School Boards.
9. "Declining Enrollment in Large Urban School Districts,"; Milton Bins, Council of Great City Schools.
10. "Recent Enrollment Trends in U.S. Non-public Schools," Donald A. Erickson, Bruce A. Cooper and Richard L. Nault, Council of American Private Education.
11. "The Management of Decline," Paul Berman and Milbrey McLaughlin, Rand Corporation.
12. "Organizational Incentives and the Growth of Competition in the Educational Sector," Steven Weiner and Ami Zusman, Stanford University.
13. "Retrenchment in Education: Impacts on the Employment of Women and Minorities," Phillip Vincent, ECS.

These studies are in varying stages of completion: five are now in hand as completed documents and I will be pleased to make them available to the committee. When the remaining studies are completed, we will assemble them as a declining enrollment anthology designed to be useful to the congress, governors, state legislators, school board members, superintendents, teachers and interested members of the education community.

There are two other activities we are supporting.

One is a comprehensive project in Seattle, Washington, the city which experienced the most rapid and pronounced enrollment decline in the nation. In a period of about six years, they lost 35,000 students and 100,000, 65,000, and we supported a joint task force of the Mayor's office and the Citizens Committee to try to respond in a creative way to the enrollment decline, with particular emphasis on the impact on neighborhood community life and community organizations using the schools as focal points of that activity.

That report will be coming in now and will be available shortly as well.

In addition, we support work in school consolidation in rural areas which may be of particular interest to members with rural constituencies. That report is now available and caused some strong interest throughout the country. We have had 14,000 requests for it.

[Report referred to follows:]

ECONOMY, EFFICIENCY, AND EQUALITY:

The Myths of Rural School and District Consolidation

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This paper will appear as Chapter II of a forthcoming book entitled Education in Rural America: A Reassessment of Conventional Wisdom (Jonathan P. Sher, editor) to be published in Spring, 1977 by Westview Press (Boulder, Colorado).

Introduction

The most successfully implemented educational policy of the past fifty years has been the consolidation of rural schools and school districts. One-room, multi-graded elementary schools have been eliminated in favor of larger, many-roomed, age-graded schools. Small rural high schools have been closed down and new, centrally-located schools built to which most students are bused. Small school districts have merged with neighboring ones and larger schools have been built within the new district. Table 1 shows just how powerful the trend toward consolidation has been.

TABLE 1

Number of Public Schools and Districts 1930-1972

Year	Districts	Elementary Schools (Total)	Elementary Schools (1-Teacher)	Secondary Schools
1930	128,000	238,000	149,000	24,000
1940	117,000	185,000	114,000	25,000
1950	84,000	128,000	60,000	24,500
1960	40,000	92,000	20,000	25,700
1970	18,000	66,000	2,000	25,400
1972	16,960	64,945	1,475	25,922

SOURCE: *Digest of Educational Statistics* (Washington, D.C.: U.S. Office of Education, National Center for Educational Statistics, 1974). Figures prior to 1972 have been rounded.

The slight increase in the absolute number of secondary schools is not at variance with the trend toward consolidation. Rather, it is attributable first, to the construction of secondary school facilities in communities and neighborhoods never before served by such institutions (a side effect of the movement toward universally available secondary education), and second, to the rise of junior high schools as independent units (a development which added thousands of new institutions to the secondary school category).

That massive consolidation was indeed occurring at the secondary level is evidenced by the fact that the number of traditional (i.e., four-year) high schools (the one kind of secondary school found throughout rural America) was *halved* during the same period in which the average secondary school enrollment *tripled.*[1]

This policy of rural school and district consolidation was implemented so successfully primarily because of a consensus among influential policymakers that it represented a reform of enormous potential for solving most of the problems long considered endemic to rural education.[2]

Indeed, this consensus is the hallmark of consolidation research, for while technical issues like optimum size were often debated, the basic premise that "bigger is better" was never seriously challenged in the literature. Many educators (particularly at the state and national level) genuinely saw consolidation as a panacea and, consequently, displayed considerable zeal in developing consolidation plans, marshalling favorable evidence, and lobbying on its behalf with state and local policymaking bodies.

Objections came primarily from rural parents (and occasionally their elected representatives), who either did not want their children going to distant, unfamiliar schools, or who feared the effects of such consolidation on the life and vitality of their individual communities. As Tyack noted:[3]

> Country people may have been dissatisfied with their school buildings and with an archaic curriculum, but they wanted to control their own schools. In a major study of rural schools in New York State in 1921, for example, 65 percent of rural patrons wanted to elect their county superintendent; 69 percent opposed consolidation of schools. Subsequent studies showed that rural people in Ohio, Wisconsin, and Idaho also opposed unification. The impetus to consolidate rural schools almost always came from outside the rural community. It was rare to find a local group that "had sponsored or spearheaded the drive for reorganization."

However, even those individuals and communities with fundamental objections to consolidation were willing to concede that consolidated schools would save money through a combination of scale economies and increased operating efficiency. Similarly, everyone simply assumed that the more highly educated teachers and administrators often found in consolidated schools would inevitably be "better" than their less-credentialed counterparts.

In the final analysis, large new rural schools and school districts were a tangible and effective symbol of the modernization which increasingly permeated all aspects of rural life in America. In education, modernization itself was a proxy--a proxy for the higher quantity and quality of educational resources (teachers, laboratories, vocational education, etc.) which had been both long desired and long denied. Rural people wanted these resources because they both assumed and had repeatedly been told that such resources would lead directly to increased learning for their children and, thereby, an increased chance of success in their children's lives.

The values of smallness--local control, the close relations possible among professionals, parents, students, and community, and the opportunity for many more students to participate in school activities at a more meaningful level--were discussed but seemed overshadowed by the promise of new buildings, more courses, and sophisticated equipment. All in all, the benefits of consolidation seemed overwhelming and the costs minimal by comparison.

Given the enthusiasm with which consolidation was advocated, one would expect the empirical evidence supporting this policy to be overwhelming. It is not. The evidence on consolidation is incomplete. Most of the research not only fails to document the alleged benefits of consolidation, but also fails to acknowledge potential liabilities or problems. With rare exceptions, this body of research is methodologically unsound, with almost every study open to criticisms severe and significant enough to make the findings extremely suspect. The conclusions are, at best, inconclusive, and, at worst, simply incorrect. In short, there is *no* strong empirical base to support the assumptions and assertions of school and district consolidation advocates.

The rest of this paper will review and analyze this body of evidence and discuss why consolidation has been so popular even in the absence of solid and reliable supporting evidence. The purpose here is not to rewrite history, but rather to make a contribution to contemporary rural education.[4] In numerous rural communities nationwide, school consolidation and reorganization programs proceed unabated, the same old arguments continue to be advanced, and faulty evidence is still presented and accepted without careful examination.

The Myth of Economy

Do large schools in rural areas save money?[5] Supposedly, there are both economies of scale and greater efficiencies through improved management in larger schools. Since economies of scale were being widely touted in much of the private sector (including agriculture), consolidation advocates found it reasonable and convenient to assume that these scale economies would also exist in public sector activities such as education.[6] The actual evidence from education, however, illustrates the drawbacks in being sanguine about such assumptions.

Economy of scale--that is, the reduction of unit costs as size increases--is both a simple and a much abused concept. Consolidation proponents have made this concept the cornerstone of their arguments for the economic advantages of large schools and districts.

However, the primary problem with the research in this area is that it consistently fails to acknowledge the presence of offsetting *diseconomies* of scale; i.e., new or enlarged costs attributable to increased size of operations. Remembering that there are also diseconomies of scale in consolidation dramatically alters the strength of the consolidators' arguments.

For example, the bulk of the relevant research ignores the additional capital expenditures, salaries, and operating costs associated with the greatly increased transportation required by consolidation.

Children who formerly walked to school now must be bused. Children who used to ride for four or five miles per day now must frequently ride twenty or more miles to reach the "centrally-located" school. All of this means more buses, more drivers, higher fuel costs, and faster depreciation than was the case prior to consolidation.

A 1973 article by White and Tweeten illustrates the importance of considering transportation costs. Using data from Oklahoma schools they estimate optimum *district* size in rural areas to be eight hundred students, when measuring only educational costs adjusted to a standard quality of program (thirty academic and eight vocational units).[7] However, when transportation costs were included, the optimum *district* size drops to 675 students.

In fact, the authors indicate that in most rural areas there are no inherent differences in the operational costs of districts anywhere within the range of four to eleven hundred students. They conclude:[8]

> Cost economies in instruction and attendant functions accrue from larger numbers of students, but cost diseconomies from transportation arise as more students must be brought to school.

White and Tweeten also calculate optimum size in areas having varying student density ratios. Average student density in Oklahoma's rural areas is 1.8 transported students per square mile. A positive relationship exists between density and size, so that a district with a density of 0.6 transported students per square mile has an optimum size of three hundred, while a more densely populated district with 3.0 students per square mile reaches optimum size at 1,075 students.[9] Once again, these calculations are adjusted to the standard quality of program mentioned earlier.

The point of this research is simple. When transportation diseconomies are included in the determination of overall educational costs in rural areas, the economies from consolidation tend to decrease markedly, or vanish altogether. As transportation costs increase, small school districts in sparsely settled areas are becoming even more economically advantageous.

Transportation is by no means the only area where important diseconomies occur. Purchasing has been cited throughout the research on consolidation as an area which perfectly illustrates how economies of scale can save rural schools and districts money. In fact, however, it perfectly illustrates the shortsightedness of disregarding offsetting diseconomies of scale.

During the 1960s, many small rural school districts banded together to form joint purchasing units so that these presumed scale economies could be captured. Instead of saving money, they discovered that one or more of the following things happened: all the money saved by volume hundred and seven hundred, it was 20:1; and in schools over seven hundred, it was 24:1.[19] Using these ratios and hypothetical salary figures of $7,000 per teacher and $10,000 per administrator, one can construct a reasonable (albeit simplified) scenario of the costs of rural high school consolidation.

Suppose three rural high schools with 140 pupils each close down and are replaced by one new 420-pupil school. Based on the 17:1 ratio, each of the old high schools would have had eight teachers and one principal. However, given the consolidated school's 20:1 ratio, only twenty-one teachers and one principal would be needed (a net reduction of three teachers and two administrators). In the old, small schools, total professional personnel costs would be $198,000. But in the new, consolidated school, these same personnel costs would amount to $157,000--a "savings" of $41,000. This would appear to justify the claims of economy made on consolidation's behalf.

This illusion of economy, however, can only remain intact by ignoring several critical factors. For example, extensive research shows that large consolidated high schools attract a professional staff which has both higher credentials and high salary requirements (ranging from several hundred to a few thousand dollars).[20] If we assume a relatively modest average salary differential for professional staff members of $1,000, at least $22,000 of the $41,000 in "savings" vanish. The remaining $19,000 disappears when one remembers to account for consolidation's transportation diseconomies (new bus purchases, new bus drivers on the payroll, higher transportation-related operating and maintenance costs, etc.). Material and equipment costs tend to be higher in consolidated high schools, primarily because of the purchase of items not normally found in small high schools. Once again, short-run building and maintenance costs are higher in the new school, though consolidation occasionally produces a comparative advantage in this area over time. Far from saving money, consolidated high schools must discard professional staff and raise pupil-teacher ratios to maintain even the approximate level of operating expenses found in the smaller schools.[21]

Consolidation proponents would doubtless point out that while all these cost arguments might be true, the important thing is that consolidation brought better resources, and hence a better quality of education to rural communities. Questions of quality will be addressed later in this paper. The only point being discussed here is economy; i.e., the least expensive delivery system for rural education. In light of this discussion, the traditional claim that consolidating rural schools and districts will, *ipso facto*, save money, appears to have no empirical or logical basis. It is simply incorrect to assert that consolidation is synonymous with economy.

The Myths of Economy, Efficiency, and Equality in District Reorganization

With the important exception of the White and Tweeten study, the evidence presented thusfar has focused primarily on *school* size and its relationship to cost and quality. Yet, another voluminous body of literature considers possible economies and the equalization of expenditures per pupil that come with *district* reorganization. Much of this literature is descriptive and assertive, and strongly advocates the creation of large districts.[22] The campaign has been effective because the United States now has fewer than 17,000 school districts, whereas in 1930 there were 127,000. Administrators call for still more large districts:[23]

> I anticipate that within the next ten-year period we will probably see fewer than a total of 10,000 school districts. And at that time we will still be promoting even further reorganization. Ultimately, it is not impossible to think that the people of this country will reduce the number of basic administrative units to not more than about 5,000--one-third to one-fourth of the present number.

The evidence on whether this reorganization has brought the economy, efficiency, and equality so desired is not at all clear. Six studies of district economies of scale generally conclude that where they exist at all, they are quite small.[24] For example, Hirsch concludes:[25]

> This study is unable to find significant economies of scale and suggests that consolidation is unlikely to solve the fiscal problems of schools in urban America. . . . Certainly some rural school districts, and even a few urban ones, could make minor savings if they were big enough to afford more variety in high school offerings and more specialists.

The savings that occur with scale appear to be in administrative costs. ELSEGIS (Elementary and Secondary General Information Study), a sample survey of 1800 school districts conducted in 1956, reported the following percentages of instructional budget allocated to central administration by district size.[26]

TABLE 2

Percentage of Budget for Administration, by District Size

0-300	301-2,499	2,500-4,999	5,000-9,999	10,000-24,999	25,000
8.8	6.7	5.2	4.3	3.8	3.8

These figures show a noticeable trend toward relatively higher expenditures for central administration in smaller districts. The magnitude of savings in changing from 0-300 to 301-2,499 is $2,100 for each $100,000 of budget. That is not enough to cover the likely diseconomies of transportation, nor is it enough to warrant the dislocation of large numbers of students.

This sample does, however, raise some interesting points about the nature of efficiency in educational enterprises. Basically, as Zymelman states, "Efficiency and inefficiency are always relative terms."[27] If a school system is attaining *more* than it used to or more than another system given the *same* expenditure level, it may accurately be said to have achieved a degree of efficiency. Similarly, if this school system is attaining the *same* level of performance at it used to or as another system is, given a *lower* expenditure level, this too can be considered efficient.

With these definitions in mind, let us return to the above example of the apparent administrative "economy and efficiency" achieved through district reorganization. First, the reported administrative "savings" do not refer to absolute dollar expenditures, but rather to the proportion of total budget allocated to administration. For example, in a small school district having a total budget of $300,000, administrative costs would be approximately $26,400 (according to the ELSEGIS formula).[28] However, in a larger district with a total budget of $3 million, administrative costs would be approximately $156,000.[29]

Yet, the really important point here has to do with efficiency. Spending *less* to attain the *same* level of performance is efficient. However, spending *less* to attain *less* is a corruption of this concept leading only to false efficiencies. The notion of false efficiency is applicable to this example in two respects.

First, if the school board in the district having three hundred pupils decided that they would allocate just the administrative budget percentage found in the district having three thousand pupils (5.2%), they would discover that they could only spend $15,600 for administration. While they might be able to find someone willing to accept the position at that salary level, it would certainly be a more poorly trained, less experienced, and, presumably, less competent administrator than they could hire with their old administrative allocation of $26,400. Thus, while the small district would spend less, the overwhelming likelihood is that they would receive much less in return. There is no efficiency to be found here.

The second instance of false efficiency can be found in the larger district. The ELSEGIS study showed that while the proportion of administrative costs to total budget dropped with reorganization, the proportion of administrators to pupils and teachers also dropped dramatically. In other words, *each* administrator in a larger district is responsible for a greater number of students and faculty. This means that, of necessity, each student, each teacher, each parent, and each school will receive a much smaller fraction of administrative guidance, assistance, and attention. Compare, for example, the time, attention, and leadership the superintendent in a one-town school district of three hundred pupils can devote to each of the individuals and groups he serves with the service a superintendent in charge of 12,456 students spread over *fifty-seven* towns can provide (these are actual figures for one proposed superintendency under the state's district reorganization plan in Vermont).[30] These large districts may spend proportionately less, but only because they receive lower quality administration in return.

The consolidators' misuse of the concept of efficiency regarding administration has its roots in their attempt to create educational equivalents to the industrial model. Originally, economy of scale was intended to apply only to *products* and it was assumed that quality was held constant. Applying this argument to *people* undermines the assumption of consistent quality and, thereby, invalidates the use of this concept in arguing for administrative efficiency.

The search for district economies of scale often overlooks one of the major determinants of expenditure--taxable wealth. Those districts that have a large tax base relative to the number of pupils will spend more than districts with a low tax base relative to the number of pupils. A recent review of state and local school finance finds that large districts have lower taxable wealth per pupil than small districts.[31] Unless the large district taxes itself at a higher rate, or receives more state aid, it will spend less per pupil than the smaller district. What appears on the surface to be a relationship between cost and size may, in fact, be a relationship between cost and taxable wealth. Rich districts spend more per pupil than poor districts. If districts are both rich and small, it is not at all appropriate to argue that their higher costs are caused by smallness alone.

This is a particularly important point when considering equalization of taxable wealth--a problem that plagues the country today.[32] Despite massive reorganization for four decades, sizable inequities remain between districts in wealth, tax rate, and expenditure regardless of size, type of district, or pattern of state aid.

Comprehensive recent evidence is provided on the question by the National Education Finance Project, a five-volume study of state and local finance in forty-eight states. Sixteen sample states were chosen for a careful evaluation of school district reorganization and state aid distribution systems. Table 3 indicates some of the variation found in unified districts (K-12) in seven of these states.[33]

Based on an analysis of evidence from all sixteen states, the report concludes, in part:[34]

1. Analysis of current expenditures indicates substantial variation exists in expenditure. The variation exists

TABLE 3

Assessed Valuation, Tax Rate, and Expenditure for Unified (K-12) Districts by State, 1968

State	Assessed Valuation	Tax Rate (mills)	Expenditure
California	$3,578-26,054	2.64-6.69	$543-1,134
Colorado	2,031-37,651	20.00-61.18	406-1,351
Iowa	4,718-23,926	31.64-80.32	476-989
Maine	3,697-50-167	11.15-50.92	323-747
Mississippi	1,719-11,971	20.75-42.00	269-591
New York	4,755-161,174	6.04-27.79	693-3,001
Pennsylvania	4,935-60,078	5.54-32.12	471-1,347

> at all levels of organization--non-operating, elementary, secondary and unified. It is as pronounced for low-mean expenditure states as it is for states with high-mean expenditures. States with fewer districts exhibit as much disparity as those with many districts.
>
> 2. States with a small number of districts appear to have as much variation in per-student valuation as states with a large number of districts. The variation is found in states which have adopted a single pattern of unified districts, as well as states which have multiple organization schemes. It should be noted that in states with the multiple organization schemes--non-operation, elementary, secondary and unified combinations--the disparity in amount of valuation per student tends to be greater than in states with the single plan of organization.
>
> 3. Little evidence was gathered as a result of this study which would indicate that stability or equity have been achieved in tax structures. Wide variation is prevalent within states. . . . The variation in tax rates seems to be less in states with only unified districts; however, substantial variation still exists.

Though consolidation advocates claimed it would, this evidence demonstrates that equalization of wealth has not been achieved by reorganization. It also suggests that changing population distributions and alterations in the tax base might be better accommodated through state financing mechanisms than by continuing to consolidate into ever larger districts. For example, in Vermont, state planners estimate that to have the wealth per pupil and tax rate combinations that they desire requires a consolidation from 278 to 8 districts.[35] Before contemplating a change in school structure that great and that politically difficult, it would seem reasonable to look seriously at alternative financing mechanisms.

The National Education Finance Project also has interesting information on the nature of redistribution that most frequently occurs in district reorganization. In general, small districts have higher assessed valuation per pupil than large districts, and the large districts have higher tax rates.[36]

North Dakota provides excellent statistics on this point.[37]

TABLE 4

Relationship Among School Size, Assessed Valuation, and Tax Rate in North Dakota, 1967

School	Assessed Valuation	Tax Rate (mills)
168 One-room rural districts	$13,152	34.2
81 Graded elementary districts	8,890	47.2
67 Non-accredited 12-grade	5,632	41.12
211 Accredited 12-grade	4,341	60.88

If reorganization occurs in North Dakota, children from one-room rural districts are likely to have less wealth backing them and their parents are likely to pay higher taxes. The standard image of a very small, very poor, rural school district combining with larger, richer neighbors, and receiving the benefits of increased resources, while true in many sections of the country, is not always accurate. Whatever the benefits of district consolidation, rural residents have usually paid for them through higher taxes.

Again, those who support consolidation are no doubt impatient with an analysis that considers only taxes, valuations, and expenditure. To them, the important point is that reorganization brought more resources, more variety, and more choice to students. Well, maybe. But there is more to say.

Krietlow's longitudinal data on school district reorganization shows an interesting trend. Reorganized districts had an advantage in several kinds of resources immediately after they reorganized, but over time, the non-reorganized district tended to obtain the same resources.[38] The general national commitment to education has meant steadily increasing resources for everyone, regardless of organizational pattern. The notion that smaller districts had to spend "exorbitant" amounts to secure needed resources is simply without foundation in the available evidence. *No* compelling evidence exists which proves that the consolidation of rural schools and school districts produced significant *net* economic advantages. Thus, any effort to legitimize the massive rural consolidation programs implemented since 1930 must find its rationale somewhere other than in the economics of the situation.

The Myth of Improved Quality

It has long been argued that consolidation improved the quality of education. Facilities were newer and better equipped; teachers were better educated and more specialized; there were more choices available for students, such as foreign languages, music, art, and vocational courses. Because of these resources, students learned more and had a better chance in life. This argument has two stages: first, that consolidated schools provide more and better resources; and second, that those resources improve learning and life chances.

Much research has been done which tries to document that larger schools have more of everything. The most widely publicized and highly regarded research supporting this argument was James Bryant Conant's study of the American high school, published in 1959.[39] The timing of publication soon after the launch of the Russian Sputnik and Conant's reputation as the elder statesman of educational policy combined to give his conclusions the weight of tremendous authority. In the study's foreword, John Gardner (then president of the Carnegie Corporation of New York, and shortly thereafter appointed as secretary of HEW) asserted that:[40]

> It would be difficult to overestimate the importance of [Conant's] report at this time. Hundreds of thousands of Americans all over the country are concerned about their schools, wondering what to do about them, seeking answers, hoping for guidance. Mr. Conant has provided that guidance. It is for this reason that some of us believe that Mr. Conant, after a lifetime of distinguished contributions to the nation, has in this study made his greatest contribution of all . . .
>
> If I had to recommend a single piece of reading to all Americans who want to improve their schools, I would ask them to read this report.

The public response to the Conant report was uniformly enthusiastic. For example, the *Louisville Courier-Journal* said that " . . . the Conant report is a bombshell. Its import is likely to determine for a generation the direction in which public secondary education develops."[41] That this assessment was not just naive hyperbole is verified by Callahan's study of the social forces affecting public school organization and administration in America.[42] As Callahan states:[43]

> It was also predictable that [school administrators and policymakers] would welcome and quickly adopt James B. Conant's recommendations for change in the high schools, for, with his great stature in the country, his suggestions were made to order for defense. Any superintendent who could say that he was adopting Conant's recommendations, or better yet, that his school system had already been following them for years, was almost impregnable.

The most significant conclusion of the Conant report was that small high schools with fewer than one hundred in the graduating class could not offer a comprehensive curriculum or a comprehensive educational program. Sufficient size was a prerequisite to the other twenty-one recommendations made to improve the high school. As Conant put it, "The number of small high schools must be drastically reduced through district reorganization. Aside from this important change, I believe no radical alteration in the basic pattern of American education is necessary in order to improve our public high schools."[44] In other words, simply making schools bigger would make them better.

Conant began by asking whether the comprehensive high school was a feasible idea. "Can a school at one and the same time provide a good general education for *all* the pupils as future citizens of a democracy, provide elective programs for the majority to develop useful skills, and educate adequately those with a talent for handling advanced academic subjects--particularly foreign languages and advanced mathematics?"[45] The emphasis of the study quickly fell on the last part of the question--the development of the academically talented.

Various sources were consulted to determine which schools outside metropolitan areas were good comprehensive high schools. In twenty-six states, a total of 103 schools were selected. Conant was convinced even before doing this study that, " . . . a high school must have a graduating class of at least one hundred to function adequately as a comprehensive school."[46] For that reason, he generally visited schools having graduating classes of considerably more than one hundred. In the book, he reports in-depth on twenty-two schools; only three have one hundred or fewer in the graduating class.

If the assumption that small high schools are less comprehensive is correct, one might expect those three schools to be noticeably different. They are not. The summary lists fifteen items that a good, comprehensive school should have, such as "adequate instruction in social studies," "adequate non-academic elective programs," "individualized programs," "guidance services," and "good student morale."[47] None of the twenty-two schools got a perfect score of fifteen. Large schools ranked both best and worst. The mean score for the group was 8.9. The three small schools evaluated (A with ninety-five seniors, O with seventy-three seniors, and P with one hundred seniors) have scores of eleven, eight, and eight, respectively, and thus are near, or above, the mean in each case.[48]

Analyzing the checklist in this manner poses problems--notably that of weighting each item equally--but the point is that the three small schools do not (even on Conant's own criteria) support his strongly-held view that small schools are not comprehensive. He lists eight of the twenty-two schools that "satisfactorily fulfill" the objectives of the comprehensive school: schools A and P are on that list.[49]

Even if small schools are comprehensive, perhaps they really shortchange the academically talented. Conant asked each school to do an academic inventory on the graduating class of 1957. Eight positive responses for each school were possible on the inventory. No school scored eight. Two schools had seven positive responses--school A (with a graduating class of ninety-five), and school C. The mean response for schools was 3.8. Schools O and P had three positive responses each. School V (with 797 graduates) had no positive responses. On this evidence, small school A does very well indeed; O and P are fair, but by no means the worst.[50]

At another point in the report, Conant announces that he is "convinced [that] small high schools can be satisfactory only at exorbitant expense."[51] He presents *no* cost figures to support his statement. The earlier analysis in this paper of the economics of consolidation suggests that such a statement is greatly exaggerated, if not entirely false.

Conant was advancing two related arguments. First, he asserted that a critical mass of one hundred graduates was necessary to be comprehensive. Yet, his own research presents two schools (O with seventy-three seniors and A with ninety-five seniors) which are both comprehensive (by Conant's standards) and smaller than his critical mass. These discrepancies within Conant's own data make it difficult to believe that one hundred seniors is really so critical a figure after all.

More importantly, Conant was trying to establish the existence of a linear relationship between school size and comprehensiveness. He wanted to make the case that as schools became bigger, they would concomitantly become more comprehensive. Once again, however, Conant's argument is undermined by his own data. In several instances, the largest schools surveyed (such as school V with 797 seniors) were among the least comprehensive, while small school A ranked among the most comprehensive. Ironically, Conant's data persuasively demonstrates that size is a very *poor* predictor of comprehensiveness.

Conant began with the assumption that small schools could not be comprehensive and concluded that his study supported that view. It does not. What the study does indicate is great variation among schools, but it does not provide much explanation of why that variation occurs. Given that evidence, the widely acclaimed conclusion of the Conant Report is certainly incomplete and probably incorrect.

Recent evidence also refutes Conant's conclusions. For example, in the nation's most rural state (Vermont)[52] the small high schools appear to be performing every bit as well as their larger counterparts on the one available output measure--percentage of graduates entering college.[53]

In 1973-74, there were fifty-nine public senior high schools in Vermont, ranging in size of graduating class from 14 to 491.[54] Thirty four high schools had fewer than Conant's required one hundred students in the graduating class, and twenty-five had more than one hundred. In addition, of the ten high schools having the greatest percentage of graduates entering college, six were small schools and only four were large.[55]

Nor were these results obtained at the "exorbitant expense" Conant predicted. In 1973-74, the average high school per pupil operating cost in Vermont was $1,210.72. For the six best small Vermont high schools (as determined by this one outcome measure), the average operating cost was $1,170.88, whereas the average operating cost for the four best large ones was $1,395.97.[56]

Conant was concerned about the resources provided in high schools. His assumption, and the assumption of all who shared Conant's emphasis on the quantity of resources, was that in-school achievement and success in later life were both directly related to the possession of certain key resources.[57]

However, recent research by Coleman and others has suggested that most of these "key" resources (inputs) are very poor explanatory variables for school achievement (output).[58] In fact, educational research has failed to identify a single resource or practice which is consistently effective in bolstering achievement. Moreover, the presumed linkage between school success and economic success in later life has been shown to be considerably weaker than common sense would suggest.[59]

Even those whose faith in the ultimate value of better resources remains intact have come to concede that the mere possession of such resources is not sufficient to alter achievement results. Rather, they contend, the critical factor is the manner, purpose, and competence with which whatever resources possessed are utilized.[60] In either case, the implications for rural school and district consolidation (which was largely designed as a strategy for improving education inputs) are clear.

If one believes Coleman, Jencks et al., then rural consolidation becomes little more than an exercise in futility. Because structural reforms such as consolidation are unlikely to positively affect either academic achievement or lifetime earnings, the Coleman-Jencks school would conclude that it is much ado about nothing. In this view, consolidation serves mainly to divert attention away from both the need

TABLE 5

Comparison of Size/Cost Data for 10 Vermont Public High Schools Having the Highest Percentage of 1974 Graduates Entering College*

School Name	Entering College	Total Number of Graduates	Operating Costs (per pupil)
Montpelier H.S.	68%	146	$1,613.69
S. Burlington, H.S.	57%	245	1,235.76
Craftsbury Academy**	56%	16	1,300.27
Wilmington H.S.	56%	16	1,619.41
Chelsea H.S.	48%	33	1,031.90
Arlington H.S.	47%	43	1,048.73
Poultney H.S.	47%	60	875.53
Woodstock H.S.	47%	123	1,130.26
Champlain Valley H.S.	47%	224	1,631.19
Wallingford H.S.	45%	29	1,149.46

* According to the National Center for Educational Statistics, approximately 40 percent of all 1974 high school graduates nationwide went on directly to college.

** Despite the title of "academy" this school is, in fact, public.

that "higher achievement results correlated with smaller schools at both the elementary and senior high school levels."[68] Alkins concluded that "neither district size nor financial inputs showed any significant relationship to student achievement results."[69] Thrasher and Turner "found no significant differences on Iowa test scores that could be attributed to small school size" and "found no differences in grade point averages of small versus large school graduates in freshman year of college."[70]

In another major survey of the effects of school size on achievement outcomes, Herbert J. Kiesling found size of school to be negatively related to achievement.[71] Kiesling found, for example, at the twelfth grade level, achievement improved up to about twelve hundred to sixteen hundred students, but when controlled for background of the child, the child's intelligence and school expenditures, the relationship was converted from positive to negative. The author explains his findings as follows:[72]

> Thus many of the gross relationships, especially in grade 12, seem to attain a maximum at some size level in the neighborhood of 1200 to 1600 pupils in ADA and then to decline, while *after the three control variables are introduced, the entire relationship becomes negative and linear*. A possible explanation for this is that medium-sized schools exhibit better performance because they have pupils who are either more intelligent or come from better socio-economic backgrounds, or both.

Because of its rural focus, the 1968 report on factors affecting freshman year college success by Richard Raymond also is relevant.[73] Raymond, a professor at West Virginia University, studied approximately five thousand freshman students at WVU.[74]

Raymond used overall scores on the American Testing Program (ACT) and freshman year grade point averages as his measures of freshman performance. He then analyzed his data while controlling for a variety of financial, organizational, and social class variables (including a proxy for consolidation).

His finding was that *consolidation and all other school-based factors were unrelated to freshman performance*. Raymond concludes that educational and organizational differences between West Virginia county school systems (as measured here) do not produce differences in freshman performance. The differences which are significant are those beyond the control of schools. As Raymond says:[75]

> The portion of the quality differences, as they have been measured, which result from differences in population characteristics falls largely outside of the control of the school system. This portion is caused by differences in student ability and home environment.

Some of the most extensive research on school consolidation has been done by Burton Krietlow at the University of Wisconsin.[76] Krietlow began a longitudinal study of Wisconsin communities undergoing reorganization in 1949. He chose five reorganized districts (R districts), and matched them with five districts not reorganized (NR districts). Measures were taken of students in the first grade in all districts and the cohort was followed until five years after high school graduation. Data was collected on the schools, communities, teachers, and parents of the students in the cohort. A replication study following the same pattern began five years after initial data collection in each district.

The Long Term Study suffers from the problems of any longitudinal study--the inability to control very many of the factors that operate over time. Four of the five non-reorganized communities (NR) reorganized over the years and 40 percent of the students moved or dropped out. The world change a lot in twenty years, and it is extremely difficult to sort out the effects of one variable--reorganization--from the other changes. Despite these difficulties, the data collection has been done carefully and the conclusions contain the proper *caveats*.

Krietlow's results resemble those found throughout the other similar research. Significant differences in achievement appear at the sixth grade level between R and NR districts favoring the R.[77] They persist at the ninth grade level, and some remain at grade twelve--notably in reading and biological science.[78] *However, controlling for SES and IQ at grade six wipes out the observed differences in reading and science achievement at grade twelve.*[79] In other words, by going back to the original sixth grade sample and controlling for IQ and SES, it can be shown that by the time these students reached the twelfth grade, there were no significant achievement differences between R and NR samples.

These results illustrate graphically how important it is to try to separate influences on achievement. Without IQ and SES considered, reorganized schools are better on achievement measures. However, the children in these schools are more affluent and do better on intelligence measures.[80] These factors explain the achievement differences more plausibly than do size of school or district.

The Long Term Study also chose a replication cohort of first graders five years after the study began.[81] Comparing differences in achievement between original and replication cohorts within non-reorganized and reorganized districts partly separates the general trend that would increase achievement from the effects of reorganization. Using a total achievement measure, Krietlow finds significant increases in achievement for the replication cohorts in all districts, regardless of district type. Although the reorganized district scores remain higher than the non-reorganized, Krietlow (though a district consolidation advocate) is unwilling to ascribe that difference to reorganization:[82]

> Besides reorganization, significant differences found in favor of the reorganized sample may not be due entirely to reorganization, *per se*, but to hidden variables such as parents' socio-economic status, level of education, number of children in the family, rate of teacher turnover, innovations in the curriculum, and a general upturn in the values society places in education. . . . The results of this investigation strongly suggest that the significant differences found in favor of a reorganized sample should not be attributed to reorganization alone.

Another fondly held belief among consolidation proponents is that students who graduate from large high schools do better in college than children from small high schools. The reasoning has face validity. Larger high schools usually offer a greater variety of courses, have more credentialed teachers, and provide the more impersonal social relations characteristic of college life. All of these factors would seem likely to positively influence college success.

Once again, the evidence does not support the consolidation advocates' stance. Besides the Vermont and West Virginia data presented earlier, ten studies on this topic were reviewed. Six indicate that size of high school *does not* correlate significantly with college success;[83] two found a positive correlation between size and success;[84] and two others show mixed results, finding size related to freshman grades but not to later success.[85] Literature reviews by other authors show the same inconclusiveness among studies not reviewed in this paper.[86] The variability in results makes size extremely suspect as an explanatory variable. On the available evidence, it would be incorrect to assert that consolidation improves a student's chance for either enrollment or success in college.

For those who believe that the benefits of consolidation are more intangible, the evidence offers little solace. Krietlow found differences in post-high school aspirations, and differences in what the students actually did after graduation.[87] Generally speaking, students in nonreorganized districts were more likely than students in reorganized districts to choose employment. The reorganized students were more likely to choose college. The reasons for this are not clear from Krietlow's work, unless one simply accepts that something about reorganization (such as its earlier adoption by high SES communities) increases aspirations.

Sewell and Haller's work with a body of data collected on ten thousand high school seniors in Wisconsin illuminates some factors that may be at work.[88] The question they asked was what affects educational aspirations. They concluded that a whole list of factors were important: whether a student's friends were going to college, whether a high proportion of the senior class was going on, whether his teachers encouraged him to plan on college, and whether he discussed plans with teachers and counselors. Sewell and Haller then correlated college (or no

As to satisfaction, small schools reported "more satisfactions relating to the development of competence, to being challenged, to engaging in important actions, to being involved in group activites, and to achieving moral and cultural values. Large schools reported more satisfaction with 'gaining points' via participation."[93]

Writing in the same book, W. J. Campbell concludes:[94]

> This study of consolidation's effects suggests that if the small school students were transferred to a county high school they would probably undergo the following changes in experience: an increase in the number of school settings penetrated to the entry level; and a *decrease* in (1) external pressures aimed at increasing their participation in extra-curricular activities (2) sense of personal responsibility associated with extracurricular activities; (3) number of school settings penetrated to the performance level; (4) range of supervisory settings penetrated; (5) number of school settings judged to be most worthwhile; and (6) number of satisfactions associated with physical well-being, acquired knowledge and developing intellectual interests, developing a self-concept and zest for living.

As Weaver notes:[95]

> These differences between big schools and small schools are important because they represent qualities generally acknowledged by educators to be among the major goals of schooling. These qualities are also important because they are directly tied to differences in learning. Self-concept and sense of control (attitudes which Barker and Gump and Campbell report are substantially better developed in the small school) were also found by Coleman in his nationwide study to be important factors in explaining gaps in cognitive achievement of children. As Coleman states, "For example, a pupil attitude factor, which appears to have a stronger relationship to achievement than do all the 'school' factors together, is the extent to which an individual feels that he has some control over his own destiny."[96] Coleman further concludes that "the direction such an attitude takes may be associated with the pupil's school experience as well as his experience in the larger community."[97]

Barker and Gump found that participation in classes followed the same pattern as extracurricular participation. They state, "Although more school classes and more varieties of classes were available to them, the large school students participated in fewer classes and in fewer varieties than the small school students."[98] It was also discovered that small school participation included more non-academic subjects such as music, arts, shop, and physical education, but fewer academic specialties.

> At one time, the consolidation of school districts was seen as the way to [secure needed services] for large numbers of students at one time. Not any more, after the sobering experience of more than 20 years of trial leading to the conclusion that *big* is not synonymous with *better*. . . . The symbols of consolidation--impressive-looking glass, steel, and concrete structures--came to mean little to the student who spent hours getting to one of these superconglomerates and home again, often to receive less than a "quality education."

Why?

Why has there been so much consolidation and reorganization when so little is empirically justified? There are several possible explanations. It is true that school officials have had to cope with a great population redistribution from the countryside to towns and cities. Some consolidation was necessary simply because schools and districts once filled with children suddenly had only a handful. Coping with necessity, however, does not explain why such a massive movement developed.

The movement to consolidate schools was merely one part of an urbanizing, modernizing trend that affected everything in America. Industrialization, coupled with scientific advances in agriculture, unleashed a steady flow of migrants from farm to city. Modernization dictated new values and new organizational forms which emphasized large size, specialization, and professionalization. Experts replaced amateurs. Small farms, small businesses, and small schools all gave way before the tide of centralization. Those who wished to retain small farms, small communities, and small schools were considered backward and provincial.

Modernization in government was characterized by a move toward scientific management. Efficiency and economy became the prevailing creeds. School size and class size were increased. Much emphasis was placed on per pupil costs. Miniscule savings became important for principals and superintendents to report.[104] The zenith of this business influence on the schools was 1900-30, but the themes linger, particularly in "good government" arguments to rationalize and centralize administration. As Congressman Reuss argues:[105]

> The number of counties, towns, villages, and special districts could be drastically reduced from its present 81,000 in order to enable local government to obtain adequate geographical powers and revenue sources effectively, to solve local problems, and to eliminate wasteful Lilliputs. Many rural counties too small to be efficient could consolidate with their neighbors for regional cooperation. Archaic township governments--17,000 of them--could be steadily abolished. All told, it could be the greatest decimination of redundant

First, the arguments for consolidation have tremendous face validity. To argue that economies of scale may not exist, or are very small if they do, or are outweighed by diseconomies, is counter-intuitive. To suggest that newer and more modern school buildings with more educated teachers do not necessarily mean that children learn more, turns the educational world on end. Opponents of consolidation generally have not tried to directly refute the advocates. They have argued that factors other than economy and efficiency had great value. They were concerned about local control, about changes in life style, about the loss of the school in their community, and about bigger, less personal institutions. Since the opponents valued other things, they rarely made any attempt to attack the face validity of the proponents' arguments.

So, the arguments stood. Asserted over and over again, and left unchallenged, they came to be believed. As Ostrom states in an article which reveals that law enforcement, like education, has been subject to massive consolidation based upon specious evidence coupled with strident advocacy:[108]

> The assertions have been repeated for so many years, and by such righteous groups, that few questions have been raised about their empirical validity.

Such symbols of modernization as new schools, sophisticated equipment, and more credentialed teachers were believed to be important in and of themselves. They were also thought to lead to certain ends. Those who did not believe needed to be convinced. Evidence was collected to show that the symbols work. The preponderance of research on consolidation was done by people who supported its adoption and wanted to demonstrate to others that it was a good practice. For the most part, this research was done in order to convince others to believe in consolidation, rather than to find some objective truth.

Another reason that the evidence was accepted is that performance outcomes of the schools were (and are) hard to measure, and even harder to agree upon. Consolidators thought that children scored higher on achievement tests if they went to multigraded elementary schools. They thought that a broader high school curriculum better prepared students for college. Even if these things were always true (and the evidence indicates not), not everyone agrees that they are the most important performance outcomes. However, if we made a list of other outcomes (ability to relate well to others, creativity, strong self-concept) we would have great difficulty measuring them and comparing them over time. Therefore, most research on consolidation simply focused on the inputs--buildings, teachers, equipment, curriculum--and did not even try to measure and compare outcomes.

there are both actual and potential problems inherent in regionalization which must not be ignored. Foremost is that regionalization done without sensitivity and imagination could become the precursor of yet another round of even larger local units, more centralized decision-making processes, and less and less direct accountability to rural parents, students, and taxpayers.

Nevertheless, the basic point is that many alternatives for good small programs are possible now at competitive costs with a variety of widely available telephone, radio, microwave, and tape systems. Schools can choose very simple two-way telephone hookups with far-away resources or more complex systems using TV.

Other alternatives include the establishment of a teacher corps system using special subject teachers, paraprofessionals, teaching assistants, and tutors to compensate for educational deficits in rural communities, or the establishment of voluntary collaboratives for special interest activities. *The underlying premise is that resources can be brought to children, rather than forcing children to go to the resources.* The benefits of smallness *can* be coupled with the benefits of specialization.

Third, *research done to demonstrate the value of proposed reforms should be scrutinized carefully.* It is likely that a researcher brings with him certain assumptions that go unquestioned. If he believes, he wants others to do the same. This problem continues to be prevalent in most educational research. Because the research is almost exclusively done for professionals by professionals, it would be useful to ponder Cohen and Garet's recommendations for government or foundation funding of research on behalf of groups other than the state and its constituent school districts.[111] Community groups wishing to advocate the benefits of smallness in schooling could marshal and present evidence to support their claims. The decisions about what to do would be *political choices among values* (which they always have been) but the professional side would no longer be cloaked in scientific rationality.

People came to believe that the values of consolidation were supported by scientific truth. They got their new buildings and fancy equipment. They got highly-credentialed teachers, more specialists, and more professional administrators--some of which they probably would have eventually received anyway. Not surprisingly, their taxes continued to increase, as did per pupil costs.

But even with all their spending and all their new resources, rural people still did not generally receive that which they wanted most dearly--better life chances for their children. Those chances are more surely affected by the education and income of parents, the social and economic character of the community, the investment of time, energy, and love by many adults, and plain luck, than they ever are (or were) by the size, newness, or variety of the local school.

Consolidation was deemed a panacea. However, we now discover that panaceas are every bit as mythical in rural education as elsewhere in society. It's an important lesson.

REFERENCES

[1] According to the U.S.O.E. figures, the number of traditional high schools declined from 16,460 in 1930 to 6,618 in 1970. Yet, in 1930, the average secondary school had 234 pupils, while in 1950 the figure had risen to 457 pupils, and, as of 1972, the average secondary enrollment was 710 pupils.

[2] The most frequently cited problems were inadequate financing, inefficient and uneconomic operations, low achievement, inadequate staffing, and lack of programmatic quality and diversity.

[3] David B. Tyack, The One Best System (Cambridge, Mass.: Harvard University Press, 1974), p. 25. Note: The references Tyack cites here are as follows: Robert R. Alford, "School District Reorganization and Community Integration," Harvard Educational Review 30 (Fall 1960): 350-71; also, Joint Committee on Rural Schools, G. A. Works, Chairman, Rural School Survey of New York State (New York: William F. Fell, 1922).

[4] Note: It is possible to connect the issues raised in this paper about rural consolidation with the current debate over school district reorganization to achieve desegregation in metropolitan areas. This paper does not, however, have anything to contribute to the determination of constitutionally appropriate desegregation strategies. It would be absolutely incorrect to imply that the arguments found in this paper somehow support the continuation of segregated neighborhood schools in urban America.

[5] Some definitions are in order. First, our definition of a small school is: (1) any elementary school which supports no more than one classroom per grade level (thus, for example, a K-8 school having an average of twenty pupils in each grade; i.e., a total attendance of 180 pupils, fits our definition of smallness); and (2) any high school with a graduating class of less than one hundred pupils (Conant's definition). Second, our definition of rural is the open countryside and all non-metropolitan places having a total population of less than ten thousand residents.

[6] In recent years, a burgeoning literature has developed which raises serious doubts about the validity of the scale economies presumed to exist in the private sector. Examples of this literature include E. F. Schumacher, Small is Beautiful (New York: Harper & Row, 1973); John M. Blair, Economic Concentration: Structure, Behavior, and Public Policy (New York: Harcourt, Brace, Javanovich, 1974); Barry A. Stein, Size, Efficiency, and Community Enterprise (Cambridge, Mass.: Center for Community Economic Development, 1974); James Hightower, Susan DeMarco,

[20] Examples of this research include: P. L. Rajpal, "A Study of Relationships Between Expenditure and Quality Characteristics of Education in Iowa Public Schools" (Ph.D. dissertation, University of Iowa, 1967); Harold D. Patterson, "Relationships Between Size of Secondary Schools and Selected Teacher Characteristics" (Ph.D. dissertation, George Peabody College for Teachers, 1964); K. C. DeGood, "Profile of the Small High School," in Educational Leadership 18 (December 1960): 180-82; Jack B. Collingsworth, "An Analysis of the Relationship of Size of Arkansas High Schools to Selected Qualifications of High School Teaching Personnel" (Ph.D. dissertation, University of Arkansas, 1961); Harold J. Morris, "Relationship of School Size to Per Pupil Expenditure in Secondary Schools in Nine Southern States" (Ph.D. dissertation, George Peabody College for Teachers, 1964).

[21] Had pupil-teacher ratios remained at 17:1 instead of 20:1 in this example, a minimum of $24,000 in additional salary funds would be required. Similarly, adding an assistant principal or a full-time librarian, or full-time athletic coach, or a new specialist would further increase the consolidation deficit.

[22] Samples of this literature are: Planning for School District Organization, Great Plains School District Organization Project, 1968, which presents several volumes of position papers supporting reorganization; Donald T. Donley, Organizing for a Child's Learning Experience: A Report on a Study of School District Organization in Massachusetts (Boston, Mass.: Massachusetts Advisory Council on Education, 1971); and Edward J. Fabian, Committee Chairman, Vermont School District Organization Report (Montpelier, Vt.: Vermont Department of Education, May 1975).

[23] Testimony of Robert Isenberg, Associate Executive Secretary, American Association of School Administrators, before the Senate Select Committee on Equal Educational Opportunity (Washington, D.C., September 1, 1971), p. 6334.

[24] The six studies reviewed were: Henry J. Schmandt and G. Ross Stephens, "Measuring Municipal Output," National Tax Journal 3 (December 1960): 369-75; Werner Hirsch, "Determinants of Public Education Expenditures," National Tax Journal 8 (March 1960): 29-40; W. Hirsch, "Expenditure Implications of Metropolitan Growth and Consolidation," Review of Economics and Statistics 41 (August 1959): 232-41; H. Thomas James, James A. Kelly, and Walter Garms, Determinants of Educational Expenditures in Large Cities of the U.S. (Palo Alto, Calif.: Stanford University Press, 1966); N. Harrison, "Economy of Scale as a Cost Factor in Financing Public Schools," National Tax Journal 17 (March 1964): 92-95; and Herbert J. Kiesling, "Measuring a Local Government Service: A Study of Efficiency of School Districts in New York" (Dissertation, Harvard University, 1965).

[25] Werner Hirsch, "Determinants of Public Education Expenditures," National Tax Journal 13 (March 1960): 39.

[26] G. Kahn and W. Hughes, *Statistics for Local Public School District Reorganization to State Aid Distribution Systems*, Special Study Eleven, National Education Finance Project, Part II, 1970, pp. 126-34.

[27] Zymelman, *Financing and Efficiency in Education*, p. 180.

[28] Based on the equation 300 (pupils) x $1000 (per pupil expenditure) x .088 (the average budget percentage allocated for administration in districts up to 300 pupils).

[29] Based on the equation 3000 (pupils) x $1000 (per pupil expenditure) x .052 (the average budget percentage allocated for administration in districts having 3000 pupils).

[30] Fabian et al., *Vermont School District Organization Report*, pp. 38-39.

[31] Clifford Hooker and Van D. Mueller, *The Relationship of School District Reorganization to State Aid Distribution Systems*, Special Study Eleven, National Education Finance Project, Part II, 1970, pp. 126-34.

[32] Recent court decisions in New Jersey, California, and Texas have raised the issue. The Supreme Court in *Rodriguez v. San Antonio Independent School District* has said that the State has no constitutional obligation to equalize wealth per pupil. See Coons, Clune, and Sugarman, *Private Wealth and Public Expenditure* (Cambridge, Mass.: Harvard University Press, 1970) for a detailed analysis of the inequalities in wealth and recommendations for removing them.

[33] Unified districts are generally considered to be the most equalizing type of organization. Table 3 does not include elementary districts, secondary districts, or any other type which, if included, would further increase the variation.

[34] Hooker and Mueller, *The Relationship of School District Reorganization*, pp. 178-79.

[35] Fabian et al., *Vermont School District Organization Report*, pp. 38-39.

[36] Hooker and Mueller, *The Relationship of School District Reorganization*, pp. 178-79.

[37] North Dakota Statewide Study of Education, *Educational Development for North Dakota, 1967-75, "The Overview"* (Grand Forks, N.D.: University of North Dakota, 1967), pp. 15-17.

[38] Burton Krietlow, *Long Term Study of Educational Effectiveness of Newly Formed Centralized School Districts in Rural Areas*, Reports 1, 2, and 3 (Madison, Wis.: University of Wisconsin, 1962, 1966, 1971).

[39] James Bryant Conant, The American High School Today, Carnegie Series in American Education (New York: McGraw-Hill, 1959).

[40] Ibid.

[41] Ibid.

[42] Raymond Callahan, Education and the Cult of Efficiency (Chicago, Ill.: University of Chicago Press, 1962).

[43] Ibid.

[44] Conant, The American High School Today, p. 40.

[45] Ibid., p. 15.

[46] Ibid., p. 14.

[47] Ibid., pp. 24-25.

[48] Note: One of the study's ironies is that schools O and P are described as rural consolidated schools.

[49] Ibid., p. 29.

[50] Ibid., pp. 114-17.

[51] Ibid., p. 37.

[52] According to the 1970 U.S. Census.

[53] Note: To ensure comparability with Conant's study, no controls for IQ or family socio-economic status are used in the presentation of the Vermont data. As evidence presented later in this paper indicates, using such controls tends only to further the comparative advantage of small schools.

[54] Enrollment and performance data used are from "A Study of Vermont High School Graduates: Class of 1974" (Montpelier, Vt.: Statistics and Information Division, Vermont State Department of Education, January 1975).

[55] For more detailed information on Vermont high schools see: Stuart Rosenfeld, "Centralization vs. Decentralization: A Case Study of Rural Education in Vermont," in Education in Rural America: A Reassessment of Conventional Wisdom, J. Sher, ed. (Boulder, Color.: Westview Press, 1977).

[56] All cost data is from "A Comparison of Tuition Rates and Per Pupil Costs for Tuition Purposes, 1973-74" (Montpelier, Vt.: Statistics and Information Division, Vermont State Department of Education, January 1975).

[57] The key resources most often identified include high per pupil expenditures, advanced curricular offerings, faculty salaries, experience, and credentials, new equipment and facilities, and the number of books in the school library.

[58] James Coleman et al., *Equality of Educational Opportunity* (Washington, D.C.: U.S. Government Printing Office, 1966). Frederick Mosteller and Daniel P. Moynihan, eds., *On Equality of Educational Opportunity* (New York: Random House, 1972). Christopher Jencks et al., *Inequality* (New York: Basic Books, 1972).

[59] See particularly Jencks et al., *Inequality*, and Donald M. Levine and Mary Jo Bane, *The Inequality Controversy* (New York: Basic Books, 1975).

[60] See, for example, Charles E. Silberman, *Crisis in the Classroom* (New York: Random House, 1970); Neil Postman and Charles Weingartner, *The School Book* (New York: Delacorte Press, 1973); and Harvey A. Averich et al., *How Effective is Schooling? A Critical Review of Research* (Santa Monica, Calif.: The Rand Corporation, 1972).

[61] See Rachel Bussard (Tompkins), "Qualifying Paper," Graduate School of Education (Boston, Mass.: Harvard University, 1972), pp. 54-55, for a summary table of fourteen different studies. The most frequently cited of these studies are William H. Drier, "Differential Achievement of Rural Graded and Ungraded School Pupils," *Journal of Educational Research, Basic Skills as Related to Size of School and Type of Organization*, Monograph (Iowa City, Ia.: State University of Iowa, School of Education, 1949); and Burton Krietlow, *Long Term Study of Educational Effectiveness of Newly Formed Centralized School Districts in Rural Areas*, Reports 1, 2, and 3 (Madison, Wis.: University of Wisconsin, 1962, 1966, and 1971). It should be noted that much of the research presented in this paper originally appeared in Dr. Tompkin's Qualifying Paper, as cited above.

[62] Note: Only four of the fourteen took IQ and social class into account in some way.

[63] See Bussard (Tompkins), "Qualifying Paper," pp. 54-55.

[64] Leonard S. Feldt, "Relationship Between Pupil Achievement and High School Size" (University of Iowa, 1960), p. 8.

[65] Source is Timothy Weaver, "The Case Against the Preston County Comprehensive Facilities Plan for Consolidating the Schools" (Boston, University, 1975).

[66] Coleman, *Equality of Educational Opportunity*.

[67] Ibid.

[68] A. Summers and B. Wolfe, "Which School Resources Help Learning?" *Business Review* (February 1975).

[69] M. Alkin, *Economy of Scale in the Production of Selected Educational Outcomes* (Washington, D.C.: AERA, 1968).

[70] Thrasher and Turner, *School Size Does Make a Difference* (San Diego, Calif.: Institute for Educational Management, 1970), as reported by Ian Templeton, "School Size," *Educational Management Review Series*, ED 072 505 (December 1972).

[71] Herbert J. Kiesling, *High School Size and Cost Factors*, Report of of U.S. DHEW Project No. 6-1590, March 1968.

[72] Ibid., p. 77.

[73] Richard Raymond, "Determinants of Primary and Secondary Education in West Virginia," *Journal of Human Resources*, vol. 3, no. 4 (Fall 1968), pp. 450-70.

[74] Raymond's study population were those graduates from West Virginia's fifty-five county school systems enrolling at West Virginia University during the early and mid-1960s.

[75] Ibid., p. 467.

[76] Krietlow, *Long Term Study of Educational Effectiveness of Newly Formed Centralized School Districts in Rural Areas.*

[77] Ibid.

[78] Ibid.

[79] Ibid.

[80] Ibid.

[81] Ibid.

[82] Ibid.

[83] Thrasher and Turner, *School Size Does Make a Difference*; Charles W. Bernhardt, "The Effect of Per Pupil Expenditure and High School Size Upon Academic Success in College" (Ph.D. dissertation, Ball State University, 1968); J. R. Bertrand, "Relation Between Enrollment of High School from which Students Graduated and Academic Achievement of Agriculture Students at Texas A&M," *Journal of Experimental Education*, vol. 25, pp. 59-69; F. A. Burger, *Cultural Forces and Academic Success in College Freshmen*, Bulletin of the Bureau of School Services (Lexington, Ky.: University of Kentucky, 1960), vol. 33, no. 1 (September); D. P. Hoyt, "Size of High School and College Grades," *Personnel and Guidance Journal*, vol. 37, pp. 569-73; I. I. Lathrop, "Scholastic Achievement at Iowa State College Associated with High School Size and Course Pattern," *Journal of Experimental Education*, vol. 29, pp. 37-48.

[84] J. C. Bledore, "An Analysis of the Relationship of Size of High School to Marks Received by Graduates in the First Year of College," *Journal of Educational Sociology*, vol. 26, pp. 414-18; L. H. Thomberg, "College Scholarships and Size of High School," *School and Society*, vol. 20, pp. 189-92.

[85] P. S. Droyer, "Some Suggestions Concerning the Relationship Existing Between Size of High School Attended and Success in College," *Journal of Education Research*, vol. 32, pp. 271-80.

[86] H. F. Garratt, "A Review and Interpretation of Investigations of Factors Related to Scholastic Success in Colleges of Agriculture and Science and Teachers' Colleges," *Journal of Experimental Education*, vol. 18, pp. 91-138.

[87] Krietlow, *Long Term Study of Educational Effectiveness of Newly Formed Centralized School Districts in Rural Areas*.

[88] William H. Sewell and Arthur O. Haller, "Educational and Occupational Perspectives of Farm and Rural Youth," in *Rural Youth in Crisis: Facts, Myths and Social Change*, Lee Burchinal, ed. (Washington, D.C.: U.S. Government Printing Office, 1964), pp. 149-72.

[89] Ibid.

[90] Roger G. Barker and Paul V. Gump, *Big School, Small School* (Palo Alto, Calif.: Stanford University Press, 1964).

[91] Ibid., p. 196.

[92] Ibid., p. 196.

[93] Ibid., p. 197.

[94] Ibid., p. 152.

[95] Weaver, "The Case Against the Preston County Comprehensive Facilities Plan for Consolidating the Schools."

[96] Coleman, *Equality of Educational Opportunity*.

[97] Ibid.

[98] Barker and Gump, *Big School, Small School*.

[99] Ibid., p. 169.

[100] Ibid., p. 157.

[101] Weaver, "The Case Against the Preston County Comprehensive Facilities Plan for Consolidating the Schools."

[102] Barker and Gump, *Big School, Small School*.

[103] Gerald J. Kluempke, "The Emerging Role of the Regional Service Center in Rural Areas," *Proceedings of the Second National Conference of NFIRE* (Washington, D.C.: ERIC/CRESS, 1974), p. 9.

[104] Callahan, *Education and the Cult of Efficiency*.

[105] Quoted in Elinor Ostrom, "On Righteousness, Evidence and Reform: The Police Story," *Urban Affairs Quarterly*, vol. 4, no. 4 (June 1975), p. 466.

[106] Callahan, *Education and the Cult of Efficiency*.

[107] Tyack, *The System*. Note: The quotation Tyack uses here is from Ellwood P. Cubberley, *Rural Life and Education: A Study of the Rural School Problem as a Phase of the Rural Life Problem* (Boston, Mass.: Houghton-Mifflin, 1916).

[108] Ostrom, "On Righteousness, Evidence and Reform: The Policy Story," p. 467.

[109] Barker and Gump, *Big School, Small School*.

[110] Ibid.

[111] David Cohen and Michael Garet, "Reforming Educational Policy with Applied Research," *Harvard Educational Review*, vol. 45, no. 1 (February 1975), pp. 17-43. See particularly pp. 40-43.

Rather than describing these studies in detail, let me quickly draw from two of them to illustrate the range of topics under examination. Under the terms of an NIE contract with the National Conference of State Legislatures, John Callahan and his colleagues have prepared a comprehensive case study of Iowa and its experience with declining enrollment. That state legislature grasped the nettle and used enrollment decline—which freed state per caipta funds—to achieve substantial equalization of school financing across the state. It moved, in five years, from one of the least to one of the most equalized states in the nation. Not all states will be able to respond so successfully and creatively to declining enrollments, but this example clearly speaks to the potential benefits inherent in decline situations.

On the negative side, however, decline frequently occurs differentially, affecting different districts, different schools and different students differently as work of the Education Commission of the States indicates. Low wealth districts, which rely heavily on state per capita grants, are particularly sensitive to fiscal problems induced by enrollment decline.

In dealing with this general problem, it is important to note that there are only four fundamental strategies available to education policy makers and managers in dealing with declining enrollments; the policy questions discussed later are sharply affected by the choice of strategy.

The first is contraction: reduce staff and close plant as enrollment declines, the second is intensified or enriched services for existing students, the third is extension of services to previously unserved or underserved populations, such as adults or infants, and the fourth, of course, is combinations of the above.

It is in this context, then, that I would like to identify what we think are the key policy problems that face educators and education policy makers. I conclude my remarks by identifying opportunities as well as pitfalls inherent in declining enrollments.

Teachers with the highest personal and professional stake in the system, are particularly concerned with its impact. Layoffs or reliance on simple attrition produce an older and more expensive teaching force, put an added strain on state retirement systems, and raise questions about retention of gains made by women and minorities. On the other hand, maintaining existing staff levels to improve teacher-student ratios exerts a strong cost push because of the labor intensive nature of education and without any decisive evidence that such a choice will lead to improved student performance.

Administrators, who traditionally leave the classroom for the added salary and prestige of the position, are very reluctant to reduce their own number as evidenced by recent ECS findings that the rate of decline in administrators is less than that of teachers. What to do with these excess administrators is especially problematic given the unlikely solution of their reentering the classroom or bumping teachers out of positions.

Physical plants, although frequently ordinary structures, often play an important part in community life; neighborhood residents are usually reluctant to see local schools closed regardless of anticipated cost savings. Research seems to indicate that often projection cost savings do not obtain and effects of school closings have unanticipated effects on neighborhoods.

The question of school closings is exacerbated by school building design and their legal and administrative status. The architecture and location of the typical school lends itself to only a few uses; frequently schools cannot be conveniently or inexpensively converted to other purposes. At the same time, school systems, because of the nature of publicly supported capital outlay programs, may not be able to sell or otherwise dispose of such property.

There is another, perhaps compelling reason, for a go-slow policy on school closings and disposition: there is demographic evidence that another enrollment bulge can be expected by 1985. It would be ironic if the response to today's enrollment problem set the stage for increasing tomorrows. Schools closed today may be needed ten years from now.

Financial impacts, affected by the factors mentioned above, are aggravated by general inflation and spiraling energy costs. Furthermore, cost savings, even where real, are felt more slowly than enrollment declines by virtue of the fact that certain costs are fixed and not responsive to enrollment shifts for a decade.

Decline and changing student mix frequently go hand in hand. Intra-regional migration patterns continue to draw black and white middle class families to the suburbs, while the central cities are becoming increasingly populated by the poor and racial minorities. Federal policy for a decade has supported the view that these children have special educational needs, and it may be in this area that federal policy should be most carefully examined.

The management of decline may be the most pressing of the cluster of problems; as a society, we have been used to growth and expansion. It is almost certain that decline requires different skills and abilities than growth. As costs increase, as opportunities for entry and promotion diminish, the familiar incentives and disincentives no longer work.

The norms of abundance, which dominated the rapid growth period of the post-war era, have left a deep imprint and it is difficult to change perspective. It is important to point out that because most schools are no longer bursting at the seams, that policy makers and educators now have the opportunity to think through new and different educational arrangements. As one superintendent points out, when enrollments decline janitors can get their broom closets back because the space is no longer needed for remedial education.

At a more important level, it is time to re-examine the nature and consequences of school size: a real alternative to school closings is to operate more, smaller schools, or operate multi-purpose buildings in which a school is both a library, recreation, health or senior citizens center as well as a school.

For our part, we intend to conduct research in this area and hope, within the year, to be able to report to you on this important subject. Our first inquiry in this area—an examination of rural school consolidation—has produced nearly 15,000 requests for copies. It is clear that the question of small schools is an important one in the 1970s.

To our knowledge, no comprehensive analysis of the fiscal impact of decline has been undertaken, either across jurisdictions within states or among states. Although a number of ad hoc studies have been brought to a conclusion, we still have no integrated typology which would reveal the fiscal impact of decline by type of school or district. While there is evidence that most large urban districts, many small rural districts and many "first ring" suburban districts are adversely affected by decline, the impact is by no means uniform.

To the contrary, in certain situations decline may work no financial hardship. For example, high wealth districts which derive their major share of revenue from local tax sources are likely to enjoy a bonus, while low wealth districts which rely heavily upon state funding may be extremely sensitive to decline. Policy makers, then—particularly state legislators—need an accurate and extensive data base and relatively sophisticated analysis capacity to respond successfully to the challenge of declining enrollments.

The tactics available to education managers are numerous, but two are of particular interest from a policy perspective. Year round schools and multi-age grouping, two education approaches often associated with periods of growth and demand push, offer interesting flexibility in periods of decline as well. When declines are distributed evenly across a community, the opportunity to close a single building on a normal calendar may not be present. But year round operations, with their greater capacity, can permit three schools to do the work of four underenrolled schools.

Similarly, multi-age grouping can permit smaller schools to maintain themselves in spite of sizeable student losses. So long as thirty children of the same age per class is the inviolable standard, decline can have devastating effects on a school. The flexibility of multi-age grouping, however, originally proposed as an academic reform, may have as much to recommend it as a management reform in dealing with decline.

The Federal entry into education of the handicapped may have potentially a strong effect on responses to declining enrollments: as more children are "main streamed," the pressure to improve student/ faculty ratios will increase; simultaneously the demand for more training and specialist teachers will increase. Unfortunately, the future of the implementation of this legislation is too murky to permit confident predictions, but it is an important area to watch.

In addition, a naturally occurring increase in demand appears to be developing among adult populations, as lifestyles and population mixes change. In California, for example, a majority of junior college students are now adults and in the public schools, adult education program enrollments are spiraling.

As this presentation suggests, our research findings are still tentative, but we are in a position to identify some reasonably well defined problem areas. Both state depratments and LEAs need added capacity and sophistication in dealing with the technical problems of demographic projections, particularly short-run forecasting within discreet geographic areas.

In addition, school planners and managers should learn from the fact that the educational system was caught virtually unaware by this recent cycle of declines. The magnitude and speed of the decline was a surprise to many and there is currently disagreement as to what existing trend lines portend.

As recently as a year ago, most planners were confident using Series II census projections, which project a live birth rate of 2.1. Some demographers are exploring the possibility that this projection is too generous and argue that Series III projections are more realistic—1.7. A further increase in the rate of decline would be an important development.

The politics of decline are of particular concern to educators, for as the number of school age children decreases—relative to the population as a whole—the likelihood of bond issues and tax initiatives passing also decreases. Decline then may increase public scrutiny of education and reduce public support.

In addition to providing local and state educators with "how to" materials on decline and providing targeted technical assistance, we think a modest series of case studies would be a ueful research investment. It is crucially important to school managers to know how their fellow managers have responded to similar problems. At a macro level, we are confident that the NCSL Iowa study will be useful to other states; we think similar case studies at the district level will help LEAAs.

Finally, it is appropriate for the public at large and policy makers in particular to raise the question about a declining enrollment "bonus." Historically, state legislatures and local school committees have learned that more students cost more; in that case, fewer should cost less. Policy makers should critically review the evidence before assuming that a continuing upward cost spiral is inevitable. While increased costs may be appropriate and even socially desirable, they should be viewed as the product of choice rather than necessity.

Thus at least over the next decade education policy makers can choose between cost savings or program enrichment; between increased levels of service, either to new or traditional constituencies, or reduced tax effort.

In closing, I would like to remind you that much of our work is still in progress; we will make it available to you as quickly as we can. In addition, we would be pleased to assist you in whatever way possible as you continue your examination of this and similar subjects.

Thank you.

[Documents entitled Appendix A, Annex 1 to Appendix 1, and Annex 2 to Appendix 1 submitted by Mr. Doyle follow:]

Appendix A

Declining Enrollments: The Effects on States and Districts

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School Finance and Organization Division
National Institute of Education
April 1977

Introduction

During its hearings on the 1975 fiscal year appropriation for the Department of Health, Education and Welfare, the Senate Committee on Appropriations directed the National Institute of Education (NIE) to undertake more goal-oriented research activities and specifically identified the area of school finance reform as an example of such an effort. In response to this mandate the Division of School Finance and Organization (SF&O) was established within the Finance and Productivity Group of the National Institute of Education to plan and implement a research and development agenda in the financing and organization of education. Specifically the Division is interested in how monies are raised, allocated and expended, and how the educational process is organized, especially as it relates to the financing of education.

Given this mandate, one of the areas of particular interest to the School Finance and Organization Division is the impact of changing enrollments on the financing and organization of elementary and secondary education. With only few exceptions, enrollment changes of note in the 70's are declining enrollment situations. The preceeding three decades had left the education establishment comfortable with growth; decline, however, is another matter. Reports from the field indicate an increasing amount of perplexity as costs rising concurrently with declining population. For generations, legislatures, school committees and the public at large have believed that more students cost more; why then, don't fewer students cost less? This perplexity was confounded by a student shortage which occurred simultaneously with serious inflation. How could local education agencies be cushioned from the impact of decline when rising fixed costs prevented pro-rata reductions in expenditures?

Questions such as these led NIE/SF&O to organize a systematic investigation of phenomenon of declining enrollment. Beginning with demographics and working with a series of interest groups a research agenda was developed (a copy is appended as Annex 2 to Appendix 1). The aim of the research program is to provide intellectual coverage of the issues encompassed by declining enrollment. Our intention was to document the problem, understand the approaches to ameliorating its effects, and to disseminate findings to a variety of audiences.

In accomplishing these related objectives, a variety of personnel ranging from academicians to a superintendent have been utilized; several different research strategies from basic research to a research agenda building conference have been employed; and the issues extending from global demographics to the problems faced by local superintendents have been explored.

This paper is an essay summarizing several of the important points resulting from NIE's research. It is divided into six sections. First it describes where decline is occurring. The discussion indicates that declining enrollments are not a uniform phenomenon. Rather, they occur predominantly in the Mid-Atlantic, Mid-West and Pacific states, while the South and Southwest enjoy increasing enrollments. Even within the same state increases decreases occur, with cities and rural areas most likely to experience decline.

In Section II the paper explains why the financing of the educational enterprise is so sensitive to the loss of students and how LEAs have come to rely on state financial support. Although some states are sensitive to the plight of local districts and have attempted to cushion the burden of declining enrollment by modifying their funding mechanism, frequently these measures have been enacted without examining how such alterations might affect the equalization of resources.

The fact that decline varies within states and within districts, as well as among states, complicates attempts to ameliorate financial loss due to declining enrollment.

Examination of districts suffering from student loss in Section III reveals decline has not resulted in hugh savings. Furthermore, it seems that some types of districts are better able to bear the costs of decline. Districts experiencing the most decline in one study conducted for NIE had assessed valuations greater than their statewide average. However, they also taxed themselves at a rate equal to or greater than the average for their state. Available data suggests that districts suffering the most are urban districts, which have an extensive property wealth base, but tax themselves inordinately to cover the costs of the wide range of services they dispense.

In Section IV the impact of decline on teachers is noted. The teaching profession, it seems, is bound to bear the brunt of the impact of decline. Given the over-supply of teachers, many are more likely to end up in different careers than the one for which they had trained. Those remaining in the schools are likely to grow older, more experienced and more highly salaried as the influx of younger teachers--often the more likely to hold innovative ideas--abates. Future collective bargaining contracts will probably find teachers demanding more job security and certain working conditions that maintain teacher demand.

Section V reviews the results of a case study of how one state handled its declining enrollment problems by taking advantage of the situation to redraft its funding formula. As a result of the school finance revision, the state assumed a greater proportion of educational expenses at a time when there were less bodies to support. The overall cost to the state, then, was minimal pre-and post-reform.

Finally, NIE's research examines how decline affects the delivery of services. Although districts have a range of options available to them, they appear to gravitate toward two remedies: dismissing teachers or closing schools. The uniformity of response suggests that the management of decline does not often result in imaginative and creative answers. It is clear that decline requires different management skills than does a period of growth; it is essential to understand this to successfully deal with the future.

I

Where is Enrollment Decline Occurring

Approximately three-fourths of the states (37 states) have experienced enrollment declines since 1970 as indicated by Table 1. California, alone, has lost 239,000 students since 1970 and Ohio has lost 112,000. To obtain an indicator of the impact of the decline, the absolute numbers have been adjusted to a percent of 1970 enrollments. Sixteen states have lost at least four percent of their students, with Kansas losing approximately thirteen percent, and North Dakota, ten percent. Twelve states have experienced increasing enrollments during the past five years (Table 2) with Arizona (+ 9.8) and Florida (+ 8.1) leading the list.

Just as enrollment shifts vary by state and geographic region, they also vary by grade level, district and type of community. Table 3 illustrates that the overall impact of declining enrollment has been most severe in the early grades while enrollment increases are still taking place in secondary grades. This phenomenon indicates that during the next decade high schools will have to adjust to the loss of increasing numbers of students.

The distribution of enrollment changes is also far from uniform among school districts within the states, as data in Table 4 indicates. Many school districts have experienced declines of students in excess of 20 percent, while an even greater number have experienced increases of 20 percent or more.

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TABLE 1

Declining Enrollments of State School Systems
1970 to 1975

	In Thousands	% Decline from 1970 Enrollments
Alabama	48	6.0
Arkansas	12	2.7
California	239	5.2
Connecticut	7	1.1
Delaware	4	3.0
Georgia	27	2.5
Hawaii	6	3.3
Illinois	79	3.4
Indiana	55	4.5
Iowa	44	6.6
Kansas	66	12.9
Kentucky	22	3.1
Louisiana	9	1.1
Maryland	29	3.2
Michigan	60	2.8
Minnesota	37	4.0
Mississippi	25	4.7
Missouri	46	4.4
Montana	6	3.4
Nebraska	13	4.0
New Jersey	24	1.6
New Mexico	1	.4
New York	66	1.9
North Carolina	23	1.9
North Dakota	15	10.2
Ohio	112	4.6
Oklahoma	36	5.7
Oregon	7	1.5
Pennsylvania	97	4.1
Rhode Island	11	5.9
South Carolina	16	2.5
South Dakota	13	7.8
Tennessee	35	3.9
Texas	78	2.7
Washington	39	4.7
Wisconsin	26	2.6
Wyoming	2	2.3

As cited in Leppert and Routh, 1976
Source: U.S. Department of Health, Education and Welfare;
National Center for Education Statistics.
The Condition of Education, 1976.

TABLE 2

Increasing Enrollments of State School Systems
1970 to 1975

	In Thousands	% Increase Since 1970
Alaska	6	7.5
Arizona	43	9.8
Colorado	13	2.4
Florida	116	8.1
Idaho	4	2.2
Maine	3	1.2
Massachusetts	32	2.7
Nevada	8	6.3
New Hampshire	12	7.5
Vermont	1	1.0
Virginia	5	.5
W. Virginia	1	.3

Source: U.S. Department of Health, Education and Welfare; National Center for Education Statistics, The Condition of Education, 1976.

As cited in Leppert and Routh, 1976

Table 3
Percent Change in Public Elementary and Secondary School Enrollment Between Fall 1970 and Fall 1974

Region and State	Percent Change in: Elementary Enrollment	Secondary Enrollment	Total Enrollment
New England	-3.7%	9.5%	1.1%
Connecticut	-4.2	10.8	-0.2
Maine	-2.1	5.8	0.1
Massachusetts	-5.9	14.5	2.6
New Hampshire	8.5	11.2	9.6
Rhode Island		-9.5	-4.8
Vermont	-3.2	-11.1	-6.5
Mideast	-7.7	4.7	-2.4
Delaware	-8.7	7.2	-1.6
Maryland	-9.1	7.4	-2.1
New Jersey	-3.8	4.2	-1.0
New York	-7.8	5.5	-1.8
Pennsylvania	-9.1	2.6	-3.7
Southeast	-0.7	4.9	1.5
Alabama	-8.0	-1.4	-4.9
Arkansas	0.8	5.6	3.0
Florida	14.5	22.8	18.2
Georgia	-4.6	3.7	-1.6
Kentucky	-3.8	1.7	-1.8
Louisiana	-0.1	0.1	0.0
Mississippi	-1.7	-6.6	-3.9
N. Carolina	-2.1	0.8	-1.2
S. Carolina	-1.9	-1.9	-1.9
Tennessee	-8.3	0.1	-3.0
Virginia	-0.8	5.0	1.4
W. Virginia	3.1	-1.1	1.2
Great Lakes	-11.5	10.9	-2.9
Illinois	-7.3	5.7	-2.6
Indiana	-9.3	3.4	-3.7
Michigan	-9.6	7.3	-1.9
Ohio	-19.2	32.3	-4.2
Wisconsin	-5.7	3.4	-2.0
Plains	-16.9	10.1	-7.2
Iowa	-29.5	49.2	-6.4
Kansas	-17.9	-5.6	-12.7
Minnesota	-10.6	4.7	-3.4
Missouri	-16.0	11.0	-9.1
Nebraska	-9.8	3.9	-3.9
N. Dakota	-14.6	2.0	-9.4
S. Dakota	-10.8	-0.6	-7.6

Table 3 (Continued)

Southwest	-16.7	42.9	1.9
Arizona	14.8	3.4	11.3
New Mexico	-11.8	0.9	-6.0
Oklahoma	-8.4	0.6	-4.5
Texas	-23.4	73.3	2.7
Rocky Mountains	-0.5	4.5	1.7
Colorado	-0.9	8.5	3.3
Idaho	-0.9	6.8	2.9
Montana	7.3	-15.5	-1.6
Utah	-2.8	5.1	0.8
Wyoming	-7.0	7.4	-0.4
Far West	-8.4	1.2	-4.7
Alaska	-18.6	85.6	7.4
California	-9.0	-0.6	-5.8
Hawaii	-7.4	5.5	-1.8
Nevada	-1.1	19.2	7.4
Oregon	-0.8	-0.3	-0.6
Washington	-9.5	2.6	-3.9
Total U.S.	-3.5	9.9	[illegible]

Source: National Education Association, Estimate of School Statistics, 1971-1972 and

Table 4

DISTRIBUTION OF PERCENT CHANGE IN STUDENTS
BETWEEN 1970-71 AND 1974-75 IN
MICHIGAN, MISSOURI, SOUTH DAKOTA AND WASHINGTON

Percent Change in Students 1970-71 to 1974-75	Number of School Districts			
	Michigan	Missouri	South Dakota	Washington
Over -25 percent	12	5	7	9
-20 to -25 percent	9	4	10	9
-15 to -20 percent	18	21	24	15
-10 to -15 percent	48	42	40	24
-5 to -10 percent	63	85	52	48
0 to -5 percent	97	60	26	43
0 to 5 percent	84	97	16	46
5 to 10 percent	95	48	7	35
10 to 15 percent	59	42	3	15
15 to 20 percent	29	24	2	17
20 to 25 percent	25	10	3	13
Over 25 percent	44	7		23

Source: Based on data from the State Departments of Education in Michigan, Missouri, South Dakota and Washington.

Prepared by the Education Finance Center, Education Commission of the States.

As cited in Odden, 1977

Decline also varies with school district size and geographic location. Results of studies conducted by the Education Commission of the States (ECS)[1] and the National Council of State Legislatures (NCSL)[2] indicate that although declining enrollments have occurred in school districts of all sizes, they have affected most severely the largest and most of the smallest districts.

In most states, as in the four states ECS studied, the very smallest school districts are located predominately in non-metropolitan areas while the largest school districts are in metropolitan locations. Table 5 shows that the school districts with the maximum enrollment declines and the school districts with the maximum increases in students are both located in non-metropolitan areas. The data in the table also clearly illustrate the effect of pupil decreases on central city school districts. The average percent enrollment change is negative for the central cities in each of the four states.

In general, declining enrollments are not a uniform phenomenon. They are occurring predominately in Mid-Western, Mid-Atlantic and Pacific coast states while the South and Southwest are enjoying a boom. To complicate matters further, both enrollment declines and increases occur simultaneously in the same state, with very small districts experiencing both shrinking and growing student populations.

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[1] Odden, Allan, "The Fiscal Impact of Declining Enrollments in Four States: A Study of Declining Enrollments in Four States - Michigan, Missouri, South Dakota, Washington", Education Commission of the States, 1976.

[2] Callahan, John, et. al., "The Cloud and the Silver Lining", National Conference of State Legislatures, Legislators Education Action Project, 1977.

TABLE 5

AVERAGE PERCENT CHANGE IN STUDENTS BETWEEN 1970-71 AND 1974-75 AMONG MICHIGAN, MISSOURI, SOUTH DAKOTA AND WASHINGTON SCHOOL DISTRICTS BY CENTRAL CITY, SUBURB AND NONMETROPOLITAN LOCATIONS

State	Location of District	Number of Districts	Percent Change in Students, 1970-71 to 1974-75: Average	Minimum	Maximum	Standard Deviation
Michigan	Central City	11	-5.3	-12.3	11.4	7.6
	Suburban	225	+2.9	-30.8	148.2	18.1
	Nonmetropolitan	347	+5.7	-48.5	162.5	18.6
Missouri	Central City	5	-10.1	-21.1	2.7	9.5
	Suburban	85	+5.0	-22.1	61.9	16.9
	Nonmetropolitan	365	+1.1	-34.4	116.5	12.8
South Dakota	Central City	2	-8.3	-5.8	-10.9	3.6
	Suburban	10	-1.0	-18.5	12.0	9.9
	Nonmetropolitan	180	-6.7	-37.5	235.4	21.7
Washington	Central City	4	-12.5	-18.5	-8.0	4.5
	Suburban	65	+4.6	-19.1	65.0	15.3
	Nonmetropolitan	228	+1.5	-85.9	204.6	25.9

Source: Based on data from the State Departments of Education in Michigan, Missouri, South Dakota and Washington.

Prepared by the Education Finance Center, Education Commission of the States.

As cited in Odden, 1977

II

The Case of State/Local Financial Interdependence

Public schools are financed by a combination of federal funds (9%), state funds (42%) and local revenue (49%). The distribution between local, state and federal sources of revenue for public school, however, varies widely from state to state. Hawaii is the only state with a fully centralized system, while New Hampshire's schools are supported almost exclusively by local property taxes. Table 6 displays the state share of non-federal revenue receipts for the support of schools. In half of the states, the state share is over 50% with eight of the states providing over 65% of the share. Of these twenty-five states, twenty have experienced decline from 1970 to 1975.

Because all state financing systems are based on student enrollment, teacher count or class count, any enrollment decline eventually produces a decline in state financial support. Thus, the greater the state share of revenue for schools, the more sensitive is the local district to state funding mechanisms. School districts in states with high levels of local support will be less affected by decline induced state aid fluctuations. Ironically, they gain as enrollments decline because they can generate more dollars per student, since the tax base and millage rate do not decline as enrollments do.

TABLE 6

State Percent of Non-Federal Revenue Receipts
for Support of Public Schools - 1975-76

Number of States	10	15	17	8
	Under 35%	35% to 50%	51% to 65%	Over 65%
Alabama				75.9
Alaska				76.4
Arizona			53.5	
Arkansas			61.8	
California		44.5		
Colorado		42.7		
Connecticut	28.9			
Delaware				73.6
Florida			58.2	
Georgia			59.0	
Hawaii				100.0
Idaho		49.3		
Illinois		49.3		
Indiana		43.1		
Iowa		39.8		
Kansas		49.5		
Kentucky			63.6	
Louisiana				67.5
Maine		48.5		
Maryland		41.9		
Massachusetts	24.5			
Michigan			53.7	
Minnesota			57.9	
Mississippi				69.8
Missouri		38.1		
Montana			61.3	
Nebraska	19.0			
Nevada		42.8		
New Hampshire	10.0			
New Jersey	30.7			
New Mexico				79.8
New York		41.9		
North Carolina				76.3
North Dakota			52.6	
Ohio		38.5		
Oklahoma			56.2	
Oregon	30.8			
Pennsylvania			52.7	
Rhode Island		39.0		
South Carolina			63.7	
South Dakota	18.9			
Tennessee			59.6	
Texas			56.0	
Utah			62.5	
Vermont	31.4			
Virginia	28.4			
Washington			56.2	
West Virginia			64.2	
Wisconsin	24.7			
Wyoming		35.3		

Source: Based on most current, unpublished data.
HEW, National Center for Educational Statistics.

as cited in Leppert and Routh, 1977

On the other had, districts with high levels of state support experience financial losses in direct proportion to student loss if aid is provided on a per capita basis; teacher or classroom count formulas delay loss when enrollment declines until teachers or classrooms are eliminated. Table 7 illustrates the distribution of states using student, teacher or classroom counts, the number in each category experiencing decline, and those receiving state aid compensating for this drop-off in students.

TABLE 7

Distribution of States in Various Count Categories Experiencing Decline and Receiving State Support for Student Loss

Basis on Which Count is Determined	Number of States Using Count	Number of States with Declining Enrollment	Number of States with D.E. Provision
Student	33	23	14
Teacher	11	10	4
Classroom	6	4	2
TOTAL	50	37	20

Source: determined by data in Leppert and Routh, 1976

Differences also occur based on the relative value assigned to aid units. For example, seventeen states establish the value of the teacher unit according to training and experience levels. In this case, the state has committed itself to supporting existing salary differentials. As student enrollments decline, average teacher salaries will increase because the more experienced, and more highly paid teachers are retained. Such a system will be more costly on a per pupil basis, but local districts will be less likely to suffer financial distress.

Beside distributing general aid to districts, states often direct funds to specific programs through what is called "categoricals". There are five common types of categorical programs: 1) direct instructional support such as handicapped, disadvantaged, vocational, early childhood, and career education programs; 2) special projects such as research, media services, or regional or subject matter coordination; 3) transportation services; 4) capital outlay; and 5) personnel retirement systems. Because categoricals are frequently made available for program support, and are usually not provided on a per capita basis, they respond slowly to enrollment declines. Thus, some categoricals have the effect of cushioning decline.

The problem of declining enrollments continues to cause serious concern at the state and district level. Several state departments of education have conducted lengthy studies on the topic.* Twenty-five states have modified their school finance laws to lessen the adverse financial impact associated with declining enrollments. Table 8 illustrates various approaches and relates them to declining enrollment.

Four basic approaches to soften the effects of declining enrollment are used by states. They are essentially variations of "hold harmless" schemes, designed to manipulate existing formulas.

a) state aid guarantee - regardless of enrollment, each district receives a portion of the total amount of state aid it received in a prior year;

b) prior year student count - the number of students from the immediately preceeding year(s) is used to establish the basis of aid for the current year,

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* Illinois Task Force on Declining Enrollments, Illinois Office of Education; Decker, Ervin, "The Shrinking Schools", California School Boards, Vol. 34, no. 2, February 1975, po. 28-30, 32-33; Minnesota State Planning Agency, Planning for Declining Enrollments, 1976.

TABLE 8

State School Funding Law Provisions
Which Assist Declining Enrollment Districts

State	State Aid Guarantee	Prior Year Count		Average of Two or Three Yrs	Percentage of Decline Funded	Possess Provisions	1970-75 Decline
		Required	Optional				
Alabama			Yes				
Alaska						•	Yes
Arizona			Yes				
Arkansas	Yes					•	
California						•	Yes
Colorado			Yes	Yes	Yes	•	Yes
Connecticut						•	
Delaware							Yes
Florida	Yes						Yes
Georgia						•	
Hawaii							Yes
Idaho							Yes
Illinois		Yes					
Indiana			Yes			•	Yes
Iowa						•	Yes
Kansas		Yes			Yes	•	Yes
Kentucky						•	Yes
Louisiana					Yes	•	Yes
Maine							Yes
Maryland		Yes					
Massachusetts						•	Yes
Michigan							
Minnesota	Yes				Yes	•	Yes
Mississippi					Yes	•	Yes
Missouri					Yes	•	Yes
Montana			Yes				Yes
Nebraska						•	Yes
Nevada							Yes
New Hampshire		Yes					
New Jersey	Yes					•	
New Mexico						•	Yes
New York	Yes	Yes					Yes
North Carolina						•	Yes
North Dakota				Yes			Yes
Ohio				Yes		•	Yes
Oklahoma						•	Yes
Oregon	Yes						Yes
Pennsylvania						•	Yes
Rhode Island							Yes
South Carolina			Yes				Yes
South Dakota						•	Yes
Tennessee							Yes
Texas							Yes
Utah							Yes
Vermont							
Virginia	Yes						
Washington						•	
West Virginia							Yes
Wisconsin							Yes
Wyoming					Yes	•	Yes
Totals						25	37

as cited in Leppert and Routh,1977

c) multi-year average - student averages over several years are used as the basis of aid for the current year,

d) lost student percentage guarantee - some percentage of the number of lost students may be used in the count for the current year.

The four mechanisms are distinguished by the time they permit districts to handle decline. While the first two mechanisms guarantee a continuing support despite decline, the last two mechanisms require that districts (mechanism 4) make downward expenditure decisions as student enrollment declines continue.

It is noteworthy that 19 out of 37 states with declining enrollments have no provision for mitigating its effect.

To our knowledge, no state has costed-out declining enrollment with the objective of systematically adjusting the various elements of finance formulas to reflect any increased costs associated with decline. One major study supported by NIE, however, reveals that one Mid-Western state successfully used an enrollment decline "bonus" to significantly equalize its system of school financing. During the period of maximum enrollment decline - when relatively wealthy districts suffered the strongest declines - the state passed equalizing legislation that moved it from one of the least to one of the most equalized states in the union.[1]

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[1] Callahan, op.cit.

III

The Impact of Decline on School Districts

Potentially decline at the district level may have severe economic consequences. Because declining enrollments are occurring at the same time as severe inflation, district administrators find their budgets increasing; they are unable to produce savings from declining enrollment. In addition, even absent inflation, one group of analysts estimate that approximately 10-15 percent of the school budget cannot be changed for a year; more than half of the expenditures are fixed for a two to five year period and the remainder require at least six to ten years before adjustments can be made.[1]

There is some data which can be used to investigate whether and how district financial status is affected by declining enrollment.[2] Graphs 1 & 2 array districts by decile of percent change in student enrollment between 1970-71 to 1974-75 against assessed valuation per student and tax rates, both as a fraction of the state average.

The most apparent conclusion from these data is that both property wealth per pupil and school tax rates vary considerably between each decile. Despite the variation, two patterns emerge from this data. First, the average property wealth per pupil in the first decile, i.e., that ten percent of the state's districts with the most severe student declines, is above the

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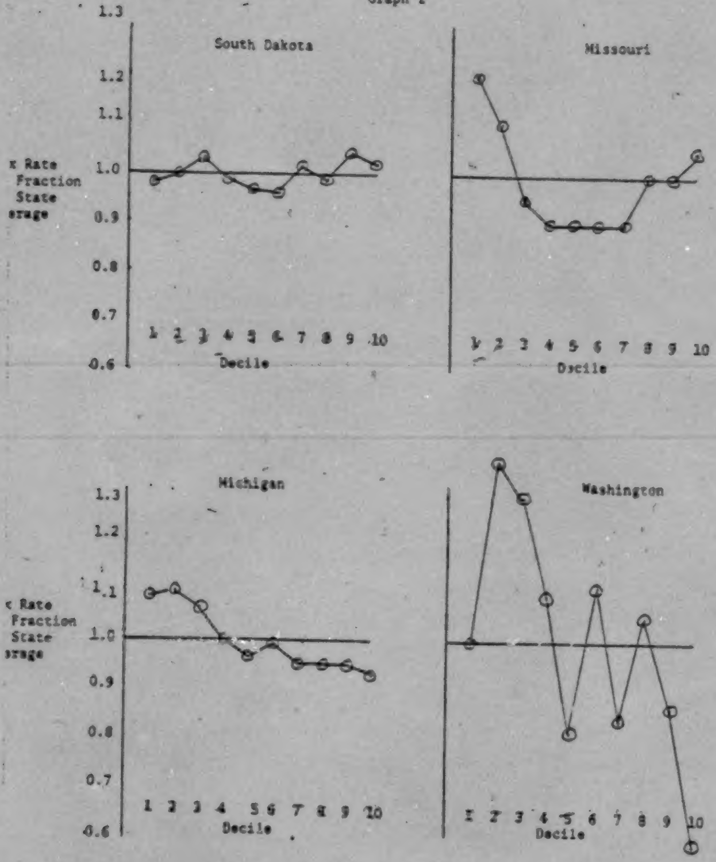
[1] Illinois Task Force on Declining Enrollment, Illinois Office of Education, pg. 197.

[2] Odden, op. cit.

Graph 2



Tax Rates as a Fraction of the State Average by Deciles of Declining Enrollment Districts, 1970-71 to 1974-75*

* Based on Data Prepared by Odden, 1977

statewide average and, except for one other decile in Michigan, the highest among all deciles in all four states. The average property wealth of the highest declining enrollment districts is 25 percent above the statewide average in Michigan, in Missouri, in South Dakota and 180 percent higher than the statewide average in Washington. In general the ten percent of school districts with the greatest enrollment declines possess a fiscal capacity 25 percent or more above the rest of the state. This result also appeared in the NCSL study of declining enrollments in Iowa.[1] The fiscal advantage of the school districts most severely affected may appear to be sufficient to allow those school districts to handle the extra costs on their own. This analysis, however, does not take into account the problem of cities which are frequently property rich, but heavily burdened by a variety of expensive social programs. If the decile with the greatest decline represents urban areas, it is quite likely that the property wealth advantage represented in this data is deceptive.

Second, although the property wealth of districts suffering the greatest enrollment decline is greater than the statewide average in all four states ECS investigated, the tax rates of these same districts hover around the statewide average in two cases and from 10 percent (Michigan) to 25 percent above (Missouri) in the other two cases. This means that declining enrollment districts tax themselves beyond what one would expect for property wealthy declining enrollment districts. One explanation for this phenomenum is that urban areas probably make up a large number of the districts experiencing the most decline and they usually have to tax themselves heavily to support municipal overburden.

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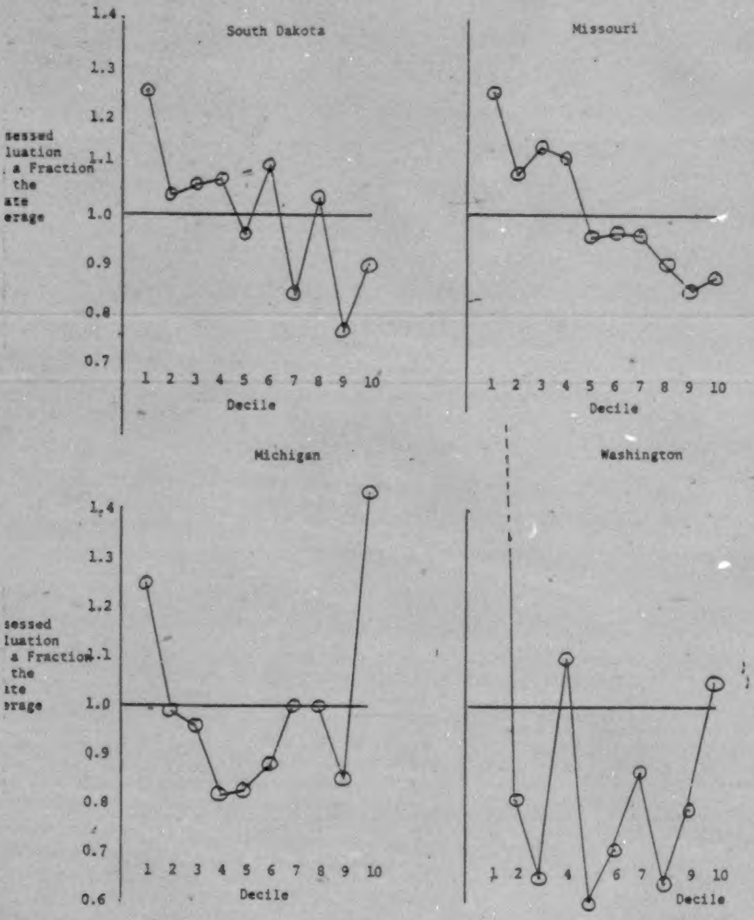
1 Callahan, op.cit.

Graph 1

Assessed Valuation as a Fraction of the State Average By Deciles of Declining Enrollment Districts, 1970-71 to 1974-75*



* Based on Data Prepared by Odden, 1977

The ECS data supports the proposition that the relationship between decline and various financial indicators for cities is unique. When one examines measures of fiscal well-being (property wealth, tax rates, operating expenditures and pupil/teacher ratio) in cities which have suffered declining enrollments, it becomes apparent that student loss has not resulted in fiscal advantages (See Table 9). First, a majority of the declining enrollment districts have lower assessed valuations and higher tax rates than the state average. Except for South Dakota, operating expenses in most of the cities suffering enrollment loss are greater than the statewide average; for all states a majority of the urban centers with declining enrollments have pupil teacher ratios greater than the state average. In most cases then it appears as if the loss of demand for school services has simply increased the cities position from one of great disadvantage to one of lesser disadvantage.

Declining enrollments result in increases in district per pupil expenditures because the total expenditures of districts do not decline in proportion as student enrollment declines. Inspection of the data in the ECS study confirms this elementary notion. (See Annex 1 to Appendix A)

- Total current operating expenditures, instructional and administrative expenditures per pupil for declining enrollment districts are all higher than the statewide average.
- The increases between 1970-71 and 1974-75 instructional and administrative expenditures are greatest in the most acutely affected declining enrollment districts, with the percentage increase of administrative expenditures exceeding teacher expenditures.[1]

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[1] Other studies confirm that the rate of decrease on administrative expenditures during decline is much smaller than the rate of decrease of teacher expenditures. Freeman, John and Hannan, Michael T., "Growth and Decline Processes in Organizations", American Sociological Review, Vol. 40, April 1975, pp. 215-228.

TABLE 9

SELECTED SCHOOL FINANCE VARIABLES FOR THE CENTRAL CITY DISTRICTS IN MICHIGAN, MISSOURI, SOUTH DAKOTA AND WASHINGTON, 1974-75

State	School District	Percent Change in Students 1970-71 to 1974-75	Number of Students 1974-75	Adjusted Assessed Valuation Per Pupil 1974-75	Adjusted School Tax Rate 1974-75	Current Operating Expenditures Per Pupil 1974-75	Pupil-Teacher Ratio 1974-75
Michigan	Muskegon Heights	-12.3 percent	3,600	$ 15,400	$27.80	$1,170	21
	Jackson	-12.1	12,800	26,000	31.50	1,343	23
	Kalamazoo	-11.9	15,900	33,200	34.40	1,594	23
	Muskegon City	-9.3	9,500	19,500	29.65	1,427	19
	Detroit	-9.8	260,900	22,100	22.51	1,290	26
	Flint	-7.8	42,400	24,900	30.65	1,349	24
	Lansing	-4.8	31,900	24,600	30.00	1,427	22
	Ann Arbor	-5.0	19,100	42,200	32.55	1,524	20
	Bay City	+0.6	17,200	22,100	25.00	1,110	25
	Grand Rapids	+3.7	36,300	22,700	27.10	1,295	22
	Saginaw	+11.4	7,600	29,800	26.35	1,175	22
	Statewide Average	-5.2 percent	41,600	$ 25,700	$23.84	$1,337	23
Missouri	Kansas City	-21.1 percent	47,957	$ 29,989	$ 2.17	$1,441	18
	St. Louis	-17.4	77,807	14,265	3.49	1,214	19
	St. Joseph	-9.4	14,123	16,651	1.95	957	19
	Springfield	-5.4	22,192	23,178	1.69	1,033	20
	Columbia	+2.7	9,817	21,415	2.29	1,131	18
	Statewide Average	+1.7 percent	1,865	$ 19,365	$ 1.98	$1,015	17.2
South Dakota	Sioux Falls	-10.9 percent	17,286	$ 15,385	$43.49	$ 936	18.3
	Rapid City	-5.8	13,129	12,381	44.37	838	19.3
	Statewide Average	-6.4 percent	794	$ 17,827	$37.82	$1,051	14.8
Washington	Seattle	-18.5 percent	55,089	$	$	$1,830	16
	Everett	-13.2	11,065			1,459	18
	Spokane	-10.2	31,582			1,265	20
	Tacoma	-8.0	34,329			1,632	17
	Statewide Average	+2.0 percent	2,510	$134,073	$	$1,525	17

Source: Based on data from the State Departments of Education in Michigan, Missouri, South Dakota and Washington.

Prepared by the Education Finance Center, Education Commission of the States.

as cited in Odden, 1977

- Pupil teacher ratios between 1970-71 and 1974-75 are greater in declining enrollment districts.
- Expenditures per pupil for maintenance and operation of plant and fixed charges are higher in declining enrollment districts.

Whether such results are a short run phenommenon or indicate a real decrease in the "quality" of education remains to be tested.

This data does, however, have implications for state policy vis a vis declining enrollment. It suggests that if a state decides to provide for a declining enrollment factor it is best developed in the context of equalization formulas to insure that the low wealth, high tax rate districts are the districts helped by a declining enrollment factor.

IV

Impact on Teachers

Declining enrollment in public schools is bound to have a major impact on the entire teaching profession. Demand for instructional staff is directly related to enrollment and unless there is a drastic change in the structure of schooling, demand will continue to abate over the next decade. Early indications from regions already experiencing decline lead to the following conclusions:

- -Demand for new teachers will decline more rapily than the supply of new teachers, exacerbating the existing problem of teacher over supply
- -Older, more experienced teachers will be retained raising costs and level of experience but reducing degree of innovation
- -Members of minorities may be the first to go during reductions of the work force
- -Teachers will try to use collective bargaining agreements to guarentee job slots and favorable working conditions

Throughout the 1950's and 1960's the teacher shortage was common knowledge among parents, teachers and counselors. Today, however, the job market for new teachers has tightened to the point where the oversupply is of major proportions. (See Table 10) Declining enrollment is expected to reduce the demand even further and although projections show a decrease in the supply of new teachers, the oversupply should persist for some time. One prediction maintains that in 1981 there will be 211,000 new teachers competing for 145,000 positions. The NCES projections, shown in Table 11, are less severe, but still indicate a large surplus of teachers.

TABLE 10

ESTIMATED DEMAND FOR CLASSROOM TEACHERS IN REGULAR PUBLIC ELEMENTARY AND SECONDARY DAY SCHOOLS: UNITED STATES, FALL 1969 TO 1984*

(In Thousands)

Year (Fall) (1)	Total Teacher Demand (2)	Demand for Additional Certificated Teachers** Total (3)	For Enrollment Changes (4)	For Pupil-Teacher Ratio Changes (5)	For Teacher Turnover (6)
69	2,013	...	...	...	...
74	2,159	192	-19	40	171
70-74	...	974	-14	159	829
		Projected***			
79	2,130	147	-46	21	172
75-79	...	837	-143	114	868
84	2,134	198	13	17	168
80-84	...	845	-83	87	841

*Includes full-time and the full-time equivalent of part-time classroom teachers (In 1974, 99 percent of teachers in the public schools were full-time). The 1969 data include some part-time teachers who were not converted to full-time equivalents. Does not include teachers in independent nurseries and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

**The estimates and projections of demand for additional certificated teachers were based on the following assumptions: (1) For changes in pupil-teacher ratios, the number of additional teachers needed is the total teacher demand in a given year less the estimated total teacher demand in the same year had the pupil-teacher ratio in the previous year remained constant. (2) For enrollment changes, the number of additional teachers needed is the total needed for both enrollment changes and pupil-teacher ratio changes less the number needed for pupil-teacher ratio changes alone; the number of additional teachers needed for both enrollment changes and pupil-teacher ratio changes is the total teacher demand in a given year less the total teacher demand in the previous years. (3) For teacher turnover, the number of additional teachers needed to replace those leaving the profession either temporarily or permanently will be 8 percent of the total employed in the previous year; the 8 percent separation rate is based on the Office of Education study _Teacher Turnover in Public Schools, Fall 1968 to Fall 1969_.

The projected demand makes no allowance for replacement of teachers who hold substandard certificates (less than 2 percent of employed teachers in 197

***The projection of classroom teachers in public schools by organizational level and institutional control is based on the assumption that the pupil-teacher ratio will follow the 1964-74 trend to 1984.

Source: National Center for Educational Statistics Projections (1976).

TABLE 11

Table 2.09.— Supply and demand for beginning teachers: 1969 to 1977

School year ending	Supply of beginning teachers	Demand for beginning teachers
1969	264,000	197,000
1970	284,000	167,000
1971	314,000	140,000
1972	317,000	175,000
1973	322,000	168,000
1974	305,000	151,000
1975	259,000	176,000
—Projected		
1976	227,000	144,000
1977	199,000	126,000

NOTE.– These estimates of supply and demand were calculated in the Population Surveys and Studies Branch, Division of Multilevel Studies, NCES.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Projections of Education Statistics to 1984-85* and *National Survey of Preservice Preparation of Teachers*, unpublished data.

In addition to the lack of new job openings, there are bound to be positions eliminated. If current policy regarding firing and hiring continues to be based primarily on seniority, the result will be an older and more experienced teaching staff. While this might appear to increase the quality of education, an older teaching force produces problems of its own.

First, it will increase average instructional costs since the teachers retained will be at higher pay levels. And since instructional costs comprise over half of the current expenditures, the increase could dramatically increase per pupil costs. A ten percent increase in teaching costs would raise per pupil costs five percent but may not appreciably improve the quality of education.

Second, the quality of teaching would be affected, but the result is unclear. On one hand, newer teachers tend to advocate new instructional ideas and to be more open to innovative methods. On the other hand, experienced teachers already have a "bag of tricks" and know how to handle problem situations. In a period of declining enrollment innovation and change will most likely be more difficult to implement.

Another important factor is the psychology of working in a declining or steady-state situation. Rewards have been closely tied to advancement and promotion in the past and opportunities are reduced when growth ends. This could be accompanied by loss of motivation, frustration and morale problems.

Third, declining enrollment could adversely affect minorities and women. As a result of affirmative action programs and a growing consciousness concerning equality of opportunity, members of minority groups have been disproportionately hired in recent years. Under conditions of decline, the last hired are often the first to be let go. Consequently, minority teachers would be the most severely affected and could lose many of their recent gains. In 1975, minorities comprised 14.5% of pre-school and kindergarten teachers, 10.6% of elementary school teachers and 7.8% of secondary school teachers. They were even more heavily represented among teacher aides (33.5%) and among service workers (25.3%).[1] Aides and service workers could be even more seriously affected since they are considered non-essential to the educational process. Aides hired to assist teachers with large classes under conditions of prosperity represent the most obvious cost to be eliminated.

An extended period of decline would thus prove regressive for the racial balance. Any modification of this procedure would, however, challenge long-standing labor policies associated with seniority and could establish a precedent for changes in contracts that would adversely affect older workers.

Another related but longer range effect of reduction of minorities and women is the lack of role models for children. An ever-present problem is trying to expand the range of role models at an early age and the teaching profession is the most visible profession to young children. White males already dominate positions of authority such as superintendents and principals and continued seniority could aggravate the problem.

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[1] Rosenberg, Bella and Vincent, Phillip, Retrenchment in Education: Problems and Policies Related to Women and Minorities , Report No. F76-9, Denver; Education Commission of the States, December, 1976.

One possible result of the problems created for teachers by declining enrollment is that they will continue to unionize, become more militant and demand to play a bigger role in policy formulation. This is, in fact, already happening. AFT membership has grown from 100,000 in 1964 to 440,000 in 1974. In 1966 26% of all agreements were comprehensive (included policy input); by 1970, 43% of all agreements were comprehensive.[1] One example of a bargaining point is class size. In 1966-67 there were 222 agreements including provisions for teacher input on the determination of class size; in 1970-71 there were 888. (See Graph 3)

The overall effect of declining enrollment on the teaching profession is bound to create problems and will undoubtedly instigate strong lobbying actions. It is essential that some of these problems of various interest groups be solved before the situation reaches critical proportions.

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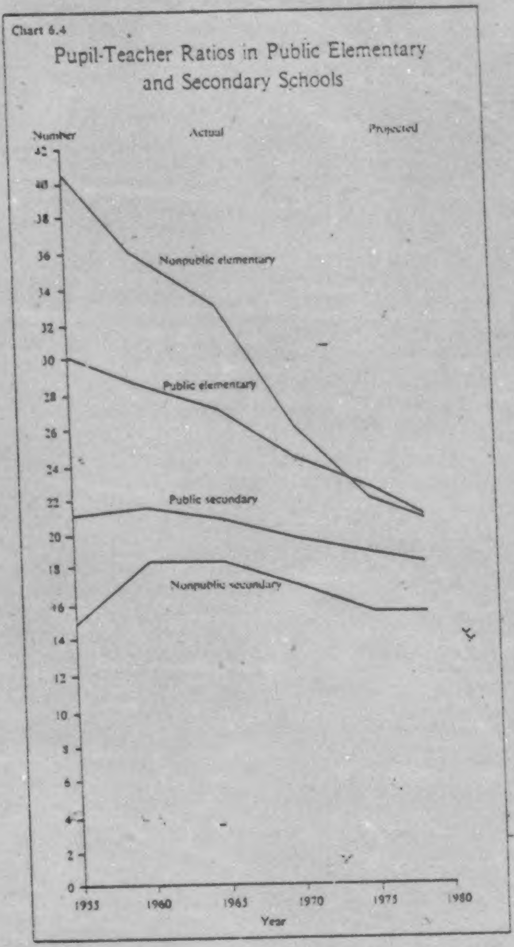
[1] McDonnell, Lorraine, Teacher Collective Bargaining and School Governance, HEW Working Paper WN-9512-1-HEW, December, 1976

GRAPH 3*



*as cited in Rosenberg and Vincent, "Retrenchment in Education: Problems and Policies Related to Women and Minorities," Education Commission of the States, 1977

V

The Impact of Decline on District Management: A Case Study

The National Conference of State Legislatures conducted a case study for NIE of problems and tensions created by declining enrollments in local school districts.[1] Relying on available data and extensive interviews in Iowa - the state which suffered the nation's most severe enrollment decline in the early '70s - the authors conclude that:

- Capital costs, debt service and building maintenance are largely fixed and fixed costs must be amortized over fewer students.
- Average teacher salaries are pushed toward the upper end of the salary schedule as attrition is reduced and there are fewer openings for new teachers.
- Community residents staunchly resist neighborhood school closings as a potential fiscal economy .
- Because many state formulas are based on per capita outlays, enrollment declines mean reduced state funding.

The author also found, however, that declining enrollment in Iowa was the impetus behind the state's revision of its school finance formula. Iowa used the reduced per pupil demand on state resources to selectively redirect funds to poorer districts. The authors observe that "During the early 1960's, Iowa operated what must rate as one of the most classically inequitable school finance systems ever devised." Within the state, however, "the prospect of declining enrollment was also used as an argument for greater state assumption of local school operating costs ... Declining enrollment would permit the state to pay for an increasing share ... of education expenditures with little or no increases in the absolute number of dollars." Using the lever of declining enrollment, by 1975 "only two other states - Florida and New Mexico - could claim less variation in their local per pupil operating expenditures."

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[1] Callahan, op. cit.

Another result of the NCSL study is the finding that both increasing and decreasing enrollment school district preceived the impact of enrollment change on the quality of specific serices similarly. "Respondents in school districts with increasing enrollment think that educational services have been deteriorating most rapidly in the same areas cited by respondents in school districts with decreasing enrollment."

"This suggests three important conclusions," the authors go on to say, "first, many of the supposed woes resulting from declining enrollment are likely to be the product of other trends. Second, that declining enrollment can result in the erosion of service quality, but not nearly to the degree that some believe. And third, that public officials who want to compensate for the disruptions of declining enrollment would be well advised to demand proof that declining enrollment is causing the specific hardship that some alledge."

Although decline has had mixed effects, the authors contend it has failed to provide any major shifts in the quality and character of local school services. Whereas districts claim that decline inhibits innovation and expansion, they also report their adjustments to it have yet to result in programmatic cutbacks. Rather what does seem to be occuring is a renewed interest in reorganization of local attendance areas and grade divisions as well as in school district consolidation.

The Management of Decline: Will "Muddling Through" be Good Enough?

Although not all states have had the foresight to solve their problems of equalization and enrollment decline simultaneously, many have altered their finance formulae to cushion the effects of decline at the district level. While some districts do get financial relief from states, by and large they still have the problems of fixed and rising costs, under utilized space, excess manpower, and community dissention about proposed solutions.

All these problems compound each other. The issue of school closings is a case in point. Closing a school is the last resort to the general problem of decline. Administrators and Board members believe that one less school will relieve financial and space pressures, although they know that others soon arise. Usually the process involved in such a decision is frought with political battles centering around concerns about preserving the "neighborhood" school. Yet when communities consider closing a school they seldom take into consideration such non-school related criteria as the impact on the neighborhood. A survey of officials involved in such a process report that property values decline, crime increases and support for public education often diminishes in those areas in which schools are closed.[1]

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[1] Andrews, Richard L. "The Environmental Impact of School Closure", Univeristy of Washington, Seattle 1974.

This illustrates the difficulty with managing a declining enrollment situation. The solution to the problem often entails consequences that could be expected but are often not considered in the decision making process. Furthermore administrators are also likely to employ short term solutions rather than developing long term planning strategies. If enrollments resurge in the early eighties, many communities which sold schools to offset financial problems during the current period will be facing the prospect of buying back or building new schools a decade later.

The basic problems of decline surpass those of decision making and planning. Problems of decline are bad enough were they not compounded by the virtual unfamiliarity Americans in general and the education industry specifically have with it.[1] Most of the United States' experience up to now has been with growth. During periods of growth there is ample slack within the system so that people can make mistakes, the consequences of which may be relatively minor or even go unnoticed. During decline the margin of error is reduced. This situation is exacerbated by the fact that those responsible for managing decline will be those least able to do so: aging managers and administrators; incumbents in positions held overly long and who guard their positions in the face of an oversupply of younger applicants; and lowered morale of long tenured professionals.[2] Given all this, it seems unlikely that decline will be well managed.

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[1] Boulding, Kenneth E. "The Management of Decline", Change, Vol. 7, No. 5, June 1975, p. 8-9.

[2] Mayhew, Lewis B., Educational Leadership and Declining Enrollments, McCutchan Publishing Corporation, Berkeley, 1974.

Berman and McLaughlin contend that the decades of the sixies can teach managers of the seventies a lesson[1] Districts, they suggest, should be able to manage the change required by enrollment decline much as they had to learn how to implement change during better times. Successful implementation of change, they believe, requires an understanding of the process whereby reform is adopted, implemented and ultimately institutionalized. All three stages require sufficient community and staff participation to guarentee a long lasting base of support. Symbolic attempts at reform can be avoided by such strategies as staff development, the efficient use of specialists, and budgetary systems which provide options rather than ones which assume automatic and arbitrary cutbacks.

The question is, "will administrators remember such lessons?"

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[1] Paul Berman and Milbrey Wallin McLaughlin, "The Management of Decline: Problems, Opportunities, and Research Questions", The Rand Corporation, 1977

Annex 1 to Appendix 1

ADDITIONAL STATISTICAL TABLES *

These charts are drawn from Gidan, 1977

TABLE A-29

AVERAGES FOR TOTAL, INSTRUCTIONAL AND ADMINISTRATIVE EXPENDITURES PER PUPIL, 1974-75 AMONG MICHIGAN SCHOOL DISTRICTS BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

ecile	Percent Change Student in Enrollment	Current Operational Expenditures Per Pupil	Instructional Salary Expenditures Per Pupil	Percent Increase in Instructional Salary Expenditures Per Pupil	Administrative Expenditures Per Pupil	Percent Increase In Administrati Expenditures Per Pupil
First	-19.4 Percent	$1162	$683	41 percent	$103	61 percent
econd	-9.0	1146	652	40	104	49
Third	-4.7	1147	658	38	98	40
ourth	-1.8	1028	590	37	85	37
Fifth	0.9	1011	579	36	84	45
Sixth	3.9	1048	580	37	86	39
eventh	6.6	1057	593	34	91	40
ighth	10.1	1029	583	38	87	38
Ninth	16.4	985	554	35	86	41
Tenth	41.7	1011	551	24	97	49
atewide	4.4 percent	$1063	$603	36 percent	$92	44 percent

urce: Based on data from the Michigan State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-30

AVERAGES FOR TOTAL, INSTRUCTIONAL AND ADMINISTRATIVE EXPENDITURES PER PUPIL, 1974-75
AMONG MISSOURI SCHOOL DISTRICTS
BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent Change Student in Enrollment	Current Operational Expenditures Per Pupil	Instructional Salary Expenditures Per Pupil	Administrative Expenditures Per Pupil
First	-17.1 percent	$1211	$655	$118
Second	-10.0	1149	640	107
Third	-7.0	1054	$575	95
Fourth	-4.2	1004	536	103
Fifth	-.8	955	525	83
Sixth	1.6	975	532	81
Seventh	4.1	962	528	75
Eighth	8.4	955	514	91
Ninth	13.4	951	522	85
Tenth	29.0	935	526	74
Statewide	1.7 percent	$1015	$555	$91

Source: Based on data from the Missouri State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A- 31

AVERAGES FOR TOTAL, INSTRUCTIONAL ADMINISTRATIVE EXPENDITURES PER PUPIL, AND PUPIL-TEACHER RATIOS, AMONG SOUTH DAKOTA SCHOOL DISTRICTS, 1974-75 BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent Change Student in Enrollment	Current Operational Expenditures Per Pupil	Instructional Salary Expenditures Per Pupil	Administrative Expenditures Per Pupil	Average Pupil-Teacher Ratio
First	-24.8 percent	$1269	$744	$93	12
Second	-17.6	1085	638	62	14
Third	-14.0	1073	628	63	16
Fourth	-11.5	1086	690	77	14
Fifth	-9.6	983	617	67	14
Sixth	-7.7	1047	659	59	14
Seventh	-5.7	1012	608	47	16
Eighth	-2.7	1029	610	62	15
Ninth	1.3	965	569	60	16
Tenth	28.3	964	501	64	17
Statewide	-6.4 percent	$1051	$626	$63	15

Source: Based on data from the South Dakota State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-32

AVERAGES FOR TOTAL, INSTRUCTIONAL AND ADMINISTRATIVE EXPENDITURES PER PUPIL, 1974-75
AMONG WASHINGTON SCHOOL DISTRICTS
BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent Change Student In Enrollment	Current Operational Expenditures Per Pupil	Instructional Salary Expenditures Per Pupil	Percent Increase In Instructional Salary Expenditures Per Pupil	Administrative Expenditures Per Pupil	Percent Increase In Administrative Expenditures Per Pupil
First	-28.2 percent	$3033	$1872	123 percent	$185	191 percent
Second	-12.6	1492	992	58	86	92
Third	-8.6	1402	982	47	69	79
Fourth	-5.6	1353	942	47	67	44
Fifth	-2.2	1312	909	45	61	67
Sixth	0.9	1348	894	45	86	60
Seventh	4.1	1336	886	50	74	105
Eighth	8.8	1336	872	43	75	39
Ninth	16.9	1280	880	54	61	35
Tenth	46.3	1343	850	33	67	40
Statewide	2.0 percent	$1525	$1007	55 percent	$83	75 percent

Source: Based on data from the Washington State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-33

AVERAGE PUPIL-TEACHER RATIOS AND AVERAGE TEACHER SALARY, 1974-75
AMONG MICHIGAN SCHOOL DISTRICTS
BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent Change in Student Enrollment	Average Pupil-Teacher Ratio, 1974-75	Average Change in Pupil-Teacher Ratio	Average Teacher Salary 1974-75	Average Change in Teacher Salary
First	-19.4 percent	21.0	-2.4	$14,789	$2,567
Second	-9.0	21.3	-1.6	13,145	2,409
Third	-4.7	21.8	-1.5	13,191	2,758
Fourth	-1.8	21.9	-2.0	12,184	2,170
Fifth	0.9	22.5	-1.7	12,417	2,221
Sixth	3.9	22.2	-2.2	12,006	2,409
Seventh	6.6	22.8	-0.9	12,460	2,488
Eighth	10.1	22.6	-1.8	12,241	2,207
Ninth	16.4	23.2	-1.3	11,980	2,293
Tenth	41.7	22.8	0.8	12,245	2,293
Statewide	4.4 percent	22.2	-1.4	$12,637	$2,382

Source: Based on data from the Michigan State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-34

AVERAGE PUPIL-TEACHER RATIO AND AVERAGE TEACHER SALARY, 1974-75
AMONG MISSOURI SCHOOL DISTRICTS
BY DECILES OF PERCENT CHANGE IN STUDENTS, 1970-71 to 1974-75

Decile	Percent Change in Student Enrollment	Average Pupil-Teacher Ratio	Average Teacher Salary
First	-17.1 percent	16	
Second	-10.0	16	
Third	-7.0	16	
Fourth	-4.2	17	
Fifth	-0.8	18	
Sixth	1.6	17	
Seventh	4.1	18	
Eighth	8.4	18	
Ninth	13.4	18	
Tenth	29.0	19	
Statewide	1.7	17	

Source: Based on data from the Missouri State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-35

AVERAGE PUPIL-STAFF RATIOS AND AVERAGE TEACHER SALARY, 1974-75 AMONG WASHINGTON SCHOOL DISTRICTS BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent Change in Student Enrollment	Average Pupil-Staff Ratio, 1974-75	Average Change in Pupil-Staff Ratio	Average Teacher Salary 1974-75	Average Change in Teacher Salary
First	-28.2 percent	12.8	-2.4	$10,683	
Second	-12.6	15.9	-2.0	11,249	
Third	-8.6	16.4	-1.3	11,910	
Fourth	-5.6	16.5	-1.6	11,471	
Fifth	-2.2	17.6	-0.8	11,612	
Sixth	0.9	17.2	-0.9	11,273	
Seventh	4.1	18.3	-0.2	11,044	
Eighth	8.8	18.5	0.4	11,426	
Ninth	16.9	19.8	-0.3	11,093	
Tenth	46.3	19.0	1.9	10,022	
Statewide	2.0 percent	17.2	-0.7	11,178	

Source: Based on data from the Washington State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-36

AVERAGES FOR SELECTED EXPENDITURES PER PUPIL, 1974-75 AMONG MICHIGAN SCHOOL DISTRICTS BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent in Student Enrollment	Average Transportation Expenditures Per Pupil	Average Operation and Maintenance of Plant Expenditures Per Pupil	Average Fixed Changes Per Pupil
First	-19.4 percent	$42	$178	$61
Second	-9.0	57	171	63
Third	-4.7	61	165	66
Fourth	-1.8	72	147	58
Fifth	0.9	76	136	57
Sixth	3.9	90	147	60
Seventh	6.6	91	140	61
Eighth	10.1	83	143	55
Ninth	16.4	87	129	58
Tenth	41.7	98	137	52
Statewide	4.4 percent	$75	$149	$59

Source: Based on data from the Michigan State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-37

AVERAGES FOR SELECTED EXPENDITURES PER PUPIL, 1974-75
AMONG MISSOURI SCHOOL DISTRICTS
BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent in Student Enrollment	Average Transportation Expenditures Per Pupil	Average Operation and Maintenance of Plant Expenditures Per Pupil	Average Fixed Changes Per Pupil	Other Expenditures Per Pupil
First	-17.1 percent	$78		$88	$110
Second	-10.0	81		82	93
Third	-7.0	92		74	82
Fourth	-4.2	81		71	86
Fifth	-0.8	88		67	77
Sixth	1.6	90		66	86
Seventh	4.1	90		65	85
Eighth	8.4	83		65	82
Ninth	13.4	83		65	71
Tenth	29.0	80		66	75
Statewide	1.7 percent	$85		$71	$85

Source: Based on data from the Missouri State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-38

AVERAGES FOR SELECTED EXPENDITURES PER PUPIL, 1974-75
AMONG SOUTH DAKOTA SCHOOL DISTRICTS
BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent in Student Enrollment	Average Transportation Expenditures Per Pupil	Average Operation and Maintenance of Plant Expenditures Per Pupil	Average Fixed Changes Per Pupil	Other Expenditures Per Pupil
First	-24.8 percent	$105	$145	$125	$23
Second	-17.6	83	111	95	11
Third	-14.0	83	114	97	13
Fourth	-11.5	76	115	105	12
Fifth	-9.6	77	110	93	13
Sixth	-7.7	81	120	97	12
Seventh	-5.7	71	102	83	19
Eighth	-2.7	78	112	91	15
Ninth	1.3	70	97	82	15
Tenth	28.3	56	86	75	18
Statewide	-6.4 percent	$78	$111	$94	$15

Source: Based on data from the South Dakota State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

TABLE A-39

AVERAGES FOR SELECTED EXPENDITURES PER PUPIL, 1974-75
AMONG WASHINGTON SCHOOL DISTRICTS
BY DECILES OF PERCENT CHANGE IN STUDENT ENROLLMENT, 1970-71 to 1974-75

Decile	Percent in Student Enrollment	Average Transportation Expenditures Per Pupil	Average Operation and Maintenance of Plant Expenditures Per Pupil
First	-28.2 percent	$337	$499
Second	-12.6	113	221
Third	-8.6	92	184
Fourth	-5.6	97	176
Fifth	-2.2	92	181
Sixth	0.9	111	183
Seventh	4.1	116	175
Eighth	8.8	117	202
Ninth	16.9	102	168
Tenth	46.3	208	179
Statewide	2.0 percent	$139	$217

Source: Based on data from the Washington State Department of Education.

Prepared by the Education Finance Center, Education Commission of the States.

Annex 2 to Appendix 1

AGENDA ON SHIFTING ENROLLMENTS
School Finance and Organization Division
National Institute of Education

Demographics

While each of the studies in this series provides some demographic background, these papers focus specifically upon national demographic trends. They are:

1. "The Demographic Background to Changing Enrollments and School Needs", Russell G. Davis and Gary M. Lewis, February 1976.

   Will the effort to revise educational thinking to accept enrollment drops result in a "mind-set" toward decline as strong as the "mind-set" toward growth that is currently proving so hard to discard? What will the population be like that educators must be serving by 1990?

   Population changes depend on birthrates, mortality rates and migration, which is most important at the local level. The fertility rate, or number of births per 1,000 women of childbearing age, is affected by changes in economic and social conditions (including improvements in birth control technology) and has been dropping fairly steadily since 1952. Only the rapid increase in the number of women in the major childbearing years (18-34) accounts for the renewed population growth expected over the next decade or so.

   The most crucial development for educators to consider is that a larger percentage of the population will be over 25 and a smaller percentage will be of school age. This will affect attitudes toward public education, the tax base and the need for adult education and job training programs, which could make new demands on the school system.

   Status: Complete; available from SF&O

2. "Demography and Changing Enrollments", Dr. Harriett Fishlow.

   This draft paper is similar to the above but differs in its more intensive discussion of the various assumptions employed in Census demographers' projections, and of the implications of those alternative assumptions upon long-term education planning. As with the Davis-Lewis paper, the Fishlow study directly addresses population trend - school planning linkages. The paper was commissioned under the auspices of the Stanford-Berkeley School Finance Symposium, sponsored by SF&O.

   Status: Draft submitted; final copy due Spring 1977.

Institutional Impacts

These studies examine the fiscal and organizational implications of enrollment declines upon state and local education agencies. Together the four papers illuminate a broad range of critical declining enrollment issues. They are:

1. "An Analysis of State School Finance Systems as Related to Declining Enrollments", Jack Leppert and Dorothy Routh, MGT of America, September 1976.

   This paper provides a very useful identification, categorization and summarization of state formula funding mechanisms across the 50 states, and the relationship of the various formulae to declining enrollment. The study indicates the various techniques used in some states to ameliorate the financial impact of decline. The paper also reviews the potential impact on school district aid of change in the four key variables used in developing state funding formulae.

   Status: Complete; available from SF&O.

2. "The Fiscal Impacts of Declining Enrollments: A Study of Declining Enrollments in four states - Michigan, Missouri, South Dakota and Washington", Education Commission of the States, November 1976.

   This report complements the broad treatment in the first paper by offering readers an in-depth look at the fiscal mechanisms employed in four states and the consequent impacts of those mechanisms upon various categories of school district expenditures. The authors examined high and low wealth school districts; urban, suburban and non-metropolitan differences; local tax effort; and minority student impacts. The study is one of several school finance papers being prepared by ECS under an NIE contract.

   Status: Complete; available from SF&O

3. "Declining Enrollment: The Cloud and Its Silver Lining", National Conference of State Legislatures: Legislators Education Action Project (LEAP), John Callahan and William Wilken.

This paper focuses upon declining enrollment's impact on state and local fiscal and organizational patterns, using Iowa as a case study base. This paper provides additional information which complements and reinforces findings emerging from the four-state ECS study above and includes a section on legislative implications. This paper is one of five school finance papers being prepared by LEAP under a School Finance & Organization contract.

Status: Complete; available from SF&O

4. "Enrollment Decline: The Dilemma from the Superintendent's Chair" William F. Keough, Superintendent of Schools, Bedford, Massachusetts.

This paper moves the reader to the perspective of a suburban school system superintendent. The immediacy of the perspective brings into sharp relief the melange of fiscal, administrative, educational and personnel issues which affect the life of a superintendent in a "decline district". The author is employing a case study of a suburban school district to highlight specific issues which must be addressed on a day-to-day basis by LEA practitioners.

Status: Drafts of several chapters submitted; final report due late Spring 1977.

Professional Association Studies

The studies listed below were commissioned both to solicit the perceptions of several associations whose constituents should be affected by declining enrollment and to avail ourselves of the natural dissemination channels these associations embody. Several additional groups were contacted; some declined to participate; and others (such as AASA) had already developed topical literature.

1. "The Imperative of Leadership: A Report on Declining Enrollments". National Association of State Boards of Education, July 1976. Robert J. Goettel, author.

   This paper describes the potential roles State Boards of Education can play in treating the consequences of declining enrollments. Conclusions extracted from a survey of high decline districts were that there was a considerable variation among districts and among states and that the most severe decline appeared to be occuring in urban areas.

   Consequences related to allocation of funds, reductions in teaching force and reduced community support were described and specific suggestions to State Boards were made to provide fiscal planning and teacher training assistance, to disseminate information and to establish standards of quality.

   Status: Complete; available from SF&O

2. "Declining Enrollment - A Conference Report", National School Board Association (NSBA), James A. Mecklenburger.

   NSBA was one of the earlier association contributors to the literature on decline. As a result, they were asked to develop a conference on the topic, and by so doing to solicit the perspective of both experts in the field and their membership regarding declining enrollment. The consequent report will summarize conference proceedings, reduce those proceedings to a useful series of actionable steps of use to school board members and suggest "policy" issues to be pursued. Upon completion, NSBA will disseminate the report to its entire membership.

   Status: Early draft already submitted; final report due in early Spring 1977.

3. "Declining Enrollment in Large Urban School Districts", Council of Great City Schools, Milton Bins.

Decline is a critical problem in urban school districts and has more to do with intra-city mobility (suburbanization) than with demographic trends. Whatever the cause however, urban schools are severely affected by declining enrollment. This paper, as with the NSBA paper above, results from a Great City Schools conference supported by NIE and run by the Council. The report will highlight issues of concern as identified by middle-level administrators in urban school districts, and will hopefully specify alternative courses of action to be pursued by urban school system superintendents.

Status: A preliminary draft has been received; a second draft and final report are due shortly.

4. "Recent Enrollment Trends in U.S. Non-public Schools", Council for American Private Education, Donald A. Erickson, Bruce A. Cooper, Richard L. Nault.

Non-public school enrollment has been declining along with public enrollment. This paper examines the trends of specific groups of non-public schools and analyzes the functions the schools perform and their future prospects. The study concludes that the overall decline in non-public school attendance is primarily a Catholic school phenomenon, and that most other groups of schools, though small in number, are growing. Furthermore, the rate of decline of Catholic school enrollment is dropping and enrollments may be stabilizing.

The growth of non-Catholic, non-public schools was attributed to reaction against desegregation measures, dissatisfaction with public schools, and new emphasis on pluralistic cultural and religious values.

Status: Complete; available from SFAO

Organizational Behavior

The above papers focus primarily upon the quantitative impacts of declining enrollment. The next two papers, although providing similar background, focus to a greater degree upon important qualitative issues relating to organizational behavior. They include:

1. "The Management of Decline", Paul Berman and Milbrey McLaughlin.

   The authors contend that the interplay between environmental (demographic, political, and economic) forces and organizational realities constitute the local context of problems resulting from a decrease in the student population. They believe that the management of decline will be exacerbated by a tendency to employ short term solutions rather than developing long term planning strategies; to avoid conflict, and to attempt to reverse or undo decisions made during expansion. Districts, they suggest, should be able to manage the change required by enrollment decline much as they had to learn how to implement change during the more halcyon days. Successful implementation of changes, they believe, requires an understanding of the process whereby reform is adopted, implemented and ultimately institutionalized. All three stages require sufficient community and staff participation to guarantee a long lasting base of support. Symbolic attempts of reform can be avoided by such strategies as staff development, the efficient use of specialists and budgetary systems which provide options rather than ones which assume automatic and arbitrary cutbacks.

   Status: Draft has been submitted; final report is expected in August 1977.

2. "Organizational Incentives and the Growth of Competition in the Educational Sector", Steven Weiner and Ami Zusman.

   School systems' reactions to declining enrollment and its attendant fiscal pressures are in many ways a function of financial incentives embodied in state aid formulae. This paper examines patterns of cooperation or competition which have emerged between high school a community college adult education programs in California. Although California's extensive community college system is atypical of the normal state post secondary system, the patterns identified in this paper may be indicative of developing trends in other state systems.

   Status: Complete; available from SF&O

Special Impacts

As with all social phenomena, declining enrollment will not affect all organizations or people in the same way or with the same intensity. Much anecdotal evidence suggested to us that declining enrollment impacts will be experienced most severely by traditionally under-represented individuals. The following paper was therefore commissioned:

1. "Retrenchment in Education: Impacts on the Employment of Women and Minorities", Education Commission of the States, Phillip Vincent, Editor.

   This paper begins with financial background supporting the notion of an "organizational retrenchment" in education and then proceeds to a detailed examination of the supply (high) and demand (low) for teachers now and in the near future, the restraints on this market imposed by seniority and tenure, and the consequences of these factors for minority and female teaching personnel. This paper may suffer slightly from the inherent absence of good data regarding staff hiring, but will provide comprehensive discussions of affirmative action and other issues which have been raised, and the approaches being used by national associations to achieve favorable staffing outcomes.

   Status: A draft has been submitted; final copy should be forthcoming in June 1977.

Service Research

In contrast to the above studies and conferences, the School Finance and Organization Division has been providing direct research support to a school system experiencing substantial declining enrollment. Initiated in summer 1975, School Finance and Organization has provided grant support to the City of Seattle and Seattle Public Schools to examine the joint issues of school closure and neighborhood stability. The purpose of the grant has been to provide funds to allow Seattle personnel to determine how best to deal with the immediate problems of decline, and how the city and school district might best cooperate in the near and long term to resolve a large number of mutual issues. Now in its second and final year, the study has thus far generated the following reports:

1. "Phase One - Executive Summary", December 1976.
2. "School Building Use Study", December 1976.
3. "Phase Two - School District/City Relationships, December 1976.
4. "Neighborhood Impact Study", August 1976.
5. "Neighborhood Survey", August 1976.

As a result of work completed in the first year, Seattle Officials requested an extension of grant activity to examine City and School District policies with respect to equal housing opportunity and school desegregation, with the objective again of achieving a mutually reinforcing approach to the achievement of integrated schools and neighborhoods in Seattle. A final report will be submitted in Summer 1977.

Mr. **LeFante**. Thank you, Mr. Doyle. Your testimony also has been most helpful. I am particularly grateful for all you have done so far. I can tell you are going to continue to stay on top of the subject and we appreciate that. There is no doubt in my mind we will be calling on you in the future.

The last witness to appear before us is Dr. Mary Golladay, from the National Center for Education Statistics, U.S. Department of Health, Education and Welfare.

STATEMENT OF DR. MARY GOLLADAY, NATIONAL CENTER FOR EDUCATION STATISTICS, U.S. DEPARTMENT OF HEALTH, EDUCATION AND WELFARE

Dr. **Golladay**. Thank you very much. It is a pleasure to be here today.

[Statement of Dr. Golladay follows:]

TRENDS IN ELEMENTARY AND SECONDARY EDUCATION

Dr. Mary A. Golladay
National Center for Education Statistics
U.S. Department of Health, Education,
and Welfare

Testimony prepared for presentation, May 10, 1977, to the Subcommittee on Elementary, Secondary, and Vocational Education, Committee on Education and Labor, U.S. House of Representatives.

TRENDS IN ELEMENTARY AND SECONDARY EDUCATION

EXECUTIVE SUMMARY

The dimensions of the elementary and secondary education enterprise are discussed in relation to three questions asked of the educational system:

1. What are the results?
   - About 3/4 of the eligible population now complete high school.
   - Science knowledge has declined, although reading and writing performance has increased for some age and population groups.
   - Substantial proportions of our 17-year-olds are still functionally illiterate.
2. How much does it cost?
   - The schools and colleges of this country annually spend a sum equal to about 8 percent of the Gross National Product. This amount, $120 billion in 1975, exceeds expenditures on defense.
   - Support for public elementary and secondary education is shared by federal, State and local sources, with States assuming a larger proportion of the total costs. In 22 States in 1975-76, at least half of all receipts of public elementary and secondary schools were contributed by the State.
   - The public continues to regard education as important, with a majority believing that we are spending too little to improve the nation's educational system.
3. Who goes to school and where?
   - The effects of a declining school-age population are being felt differentially by States.
   - Reflecting the geographic concentration of the population in certain regions the three Middle Atlantic states enroll about 16 percent of all public elementary and secondary students, while the 8 Mountain states enroll 5 percent of the total.
   - There have been changes in the geographic distribution of numbers of children in poverty since 1970.
   - Overall, private schools continue to enroll about 10 percent of the elementary and secondary population, though private enrollments are changing by region.

INTRODUCTION

I would like to outline for you some of the key dimensions of the elementary and secondary education enterprise in this country. The discussion is organized around three fundamental questions asked of the educational system:

1. What are the results?
2. How much does it cost?
3. Who goes to school and where?

In the course of considering the outcomes, the costs, the participants and the institutions, I will draw on information designed to provide as broad a contextual view as possible. Therefore, demographic and economic trends and public opinion all provide supporting information. Out of this review should come several conclusions. First, that the educational system is inextricably linked to the society that it serves. Second, that the system is extensive and complex, involving large numbers of persons and decision units. Third, that the participants in elementary and secondary education are diverse in their needs and accomplishments.

1. WHAT ARE THE RESULTS?

There is considerable concern, among educators and the general public, that the quality of education has declined. This concern is manifested in a variety of ways, especially in calls for more stringent standards, for strict discipline, and for the use of competency-based requirements for promotion from one grade level to the next or graduation from high school. The fact that our citizens are concerned about the quality of education underscores the importance which we as a society attach to the achievement of a basic education. A basic education, traditionally measured as the completion of high school, has been considered necessary to secure a livelihood and to assume some fundamental responsibilities in society.

.This year more than 3,000,000 young people will receive high school diplomas; they represent a number equal to about 75 percent, or 3/4, of the population which we could describe as the eligible population.

.The proportion of the 17-year-old age group completing high school rose steadily, with a few notable exceptions due principally to wars, from the turn of the century when it was under 10 percent until it reached 75 percent in the mid-1960's.

.This rise in high school completion has been reflected in rising levels of attainment in the adult population. By 1975, the typical adult aged 25 years old or over had completed 12.3 years of schooling--somewhat more than a high school education. And fewer than 5 percent of the adult group had received less than 5 years of schooling.

.Closer examination of the ratio of high school completions to the population reveals that this attainment level is not achieved universally by all subgroups of the population. Approximately 12 percent of the total population, 14 to 24, may be described as high school dropouts - that means they are not enrolled in school and have not completed 4 years of high school. The dropout rate is higher - 19 percent for persons who are Black.

.The population of Spanish origin displays considerable diversity with respect to the dropout rate. For persons of Spanish origin in households where only English is spoken, the dropout rate is 15 percent. For persons of Spanish origin from households where Spanish is spoken, the rate varies dramatically depending on the individual's language. For the group of these individuals who speak English, the dropout rate is 14 percent. For the individuals who generally speak Spanish, it is 45 percent.

.And of those who have remained in school, falling behind may be a serious problem. In high school, fully one fourth of the students who are Black or of Spanish origin have fallen two years behind the grade level appropriate for their age, compared to 14 percent of all students.

Achievement

Within the group of students who are enrolled and completing high school, we have been informed of fairly consistent declines in average standardized test scores, particularly on those tests designed to predict performance in college. These tests were designed for specific purposes and do not provide profiles of student achievement. The phenomenon of the test score decline is bein examined by many educators; to my knowledge, definitive explanations are not ye available.

However, we do have reliable information on the actual performance of young Americans in a variety of subject areas. In science, writing and reading, we can provide data on the performance levels of designated age groups on identical sets of items at three to five year intervals. Some of the results of these tests show:

Science knowledge in America's schools has declined. For each of three age groups (9-,13- and 17-year-olds) performance declined by about two percentage points between 1969-70 and 1972-73. However, the patterns of decline were not uniform.

- The percent of rural students who could answer a typical science question increased at all three age levels, a trend that, if it continues, could bring rural students up to the national average by 1983.
- Science achievement in the South did not decline as much between 1959-70 and 1972-73 as it did in the rest of the nation. In fact, the science knowledge of nine year old Black students in the South improved.

Reading performance of the nation's youth generally increased between 1971 and 1975, while changes in writing performance were mixed. The changes were not uniform for all groups of the population, and many aspects of performance still leave cause for concern.

- The average percent of Black 9-year-olds answering reading items correctly increased 4.8 percentage points, while the average reading performance of White 9-year-olds increased by 1.2 percentage points.
- Among 17-year-olds, over 21 percent of the students from the disadvantaged urban areas of our country, nearly 42 percent of Black students and 20 percent of students from the Southeast are still functionally illiterate.
- A survey of writing skills taken first in 1970 and repeated in 1974, found that, in 1974, students aged 13 and 17 used a simpler vocabulary, wrote in a shorter, "primer-like" style and had more incoherent paragraphs than their counter-parts in school four years earlier. Only the 9-year-olds' papers showed an improvement, with the proportion of good writers rising in 1974.

These data, from the National Assessment of Educational Progress, also permit us to draw more detailed profiles of the skills of our young

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people. To summarize what 9-, 13-, and 17-year-olds know and can do, questions were identified which were answered correctly by many students (defined as more than two-thirds), and by few students (less than one-third) This grouping yielded the following information:

.Many 9-year-olds can:
-Tell time.
-Add two-digit numbers.
-Write without making punctuation or word choice errors.

.But few 9-year-olds:
-Can subtract three-and four-digit numbers.
-Know the head of a state is called a governor.
-Can organize and elaborate ideas in writing.

.Many 13-year-olds:
-Can make change.
-Understand basic facts about the solar system and universe
-Understand the basic functions of the court system.

.But few 13-year-olds:
-Know very much about the atom
-Understand the structure and function of the legislative branch of government.

.Many 17-year-olds:
-Can calculate a simple average.
-Understand some functions and limits of the executive and judicial branches of government.
-Can read and understand short, straight-forward materials such as newspaper ads and telephone bills.

.But few 17-year-olds:

-Can convert Fahrenheit to Centigrade given the conversion formula.
-Know the functions of the legislative branch of government.

In short, the performance patterns are mixed-for subject areas and for age groups. The achievements of our young people are encouraging in some respects and discouraging in others. In some cases, disparities in achievements between subgroups in our population which have existed over time seem to be narrowing.

Yet citizens are concerned that all students may not be receiving a formal education that adequately prepares them for productive adult lives. Our society is concerned about standards and quality in education, and evidence of that interest is provided by movements towards performance-based education. An increasing percent of the public is in favor of requiring a nationwide test for high school graduation, and several States have taken initial steps toward developing performance based education programs.

·In 1976, 65 percent of the public favored a nationwide test for high school graduation, whereas in 1958, 50 percent had been in favor.[1]

·29 states were planning, designing, or implementing State-level performance-based education programs for promotion or high school graduation by July, 1976. Characteristics of the programs vary from State to State, but include such features as:
- --New promotion or graduation standards that are performance based.
- --New or revised school courses
- --Opportunities for acquiring skills or knowledge out of school
- --Local options in determining performance standards or criteria

It is still widely believed that a good education is a prerequisite to success, and the statistics on employment and income of adults provide ample evidence of strong correlative relationships between educational attainment and earnings.

·For full time male workers, a high school diploma represents at least $1,500 more in annual income. Graduating from high school for female full time workers means more than a 20 percent gain in annual income.

·Unemployment among high school graduates is less than half the rate for persons who did not complete 4 years of high school.

Over a male worker's lifetime, graduating from high school represents an estimated additional $43,000 in lifetime income.

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[1] Annual Gallup Poll of the Public's Attitudes Toward the Public Schools, Phi Delta Kappa, Phi Delta Kappan, October 1976.

2. HOW MUCH DOES IT COST?

Education is a major industry. Because the responsibilities for providing education are shared among local, State, and Federal sources, the comparative scope of education is not always evident. The most notable recent change in the financing of public education has been a shift in the share of support being borne by States. States are assuming a larger share of public education costs, due primarily to changes in school finance patterns at the State level. Many States have enacted legislation designed to equalize school expenditures and tax burdens for education within States, in some cases, in response to court directives.

A major share of expenditures by government at all levels goes to public programs serving human needs--social insurance, public aid, health and medical programs, veterans' programs, education and housing. Given the projections of sizeable increases still to come in social insurance, education will have competition for dollars in the years ahead.

.The public and private elementary and secondary schools and institutions of higher education in this country spend just under 8 percent of the Gross National Product - a figure that has changed by approximately one percentage point in 10 years. This sum, $120 billion in 1975-76, was greater than expenditures for defense ($84 billion in 1975).

.Of governmental expenditures on public programs, the portion that went to education expanded during the 1950,s and 1960,s, from 28.4 percent in 1950 to 34.9 percent in 1965; a 23 percent increase. It has contracted in recent years, to 27.4 percent in 1975, in response to greatly increased spending for social insurance.

.Total expenditures of public elementary and secondary schools rose in constant 1975-76 dollars from $47.0 billion in 1965-66 to $67.1 billion in 1975-76, 10 years later. They are projected to increase slightly above this amount and reach $76.9 billion in 1981-82.

.The support for our public elementary and secondary schools for 1975-76 was divided among sources as follows: 8.0 percent from Federal sources, 43.7 percent from State sources, and 48.4 percent from local sources. The Federal share of public elementary and secondary funds almost doubled between 1961-62 and 1969-70, going from 4.3 to 8.0 percent. However, the federal share has remained close to 8 percent over the past six years.

.States are assuming a larger share of public education costs, an estimated 43.7 percent in 1975-76 up from 38.7 percent in 1961-62. In 22 States, at least half of all receipts of public elementary and secondary schools were contributed by the States.

In contrast to State and local expenditures, federal aid has been targeted to particular purposes, and hence, has had major impact in several areas. Federal elementary and secondary education programs have been directed to:

-promoting equal educational opportunity

-improving the quality of education

-providing limited general aid

-promoting employment and career preparation

.The proportion of school revenue provided by the federal government varies widely among the States, from as high as 20 percent in some States (Mississippi and New Mexico) to a low of under 5 percent in others (Michigan and Connecticut) (see Table 1).

The average costs of elementary and secondary education per pupil have continued to rise, reaching $1,388 in 1975-76. Yet expenditure patterns for school districts both within States and across States vary so greatly that national and State averages have limited use. (see Table 2)

.Per pupil expenditures more than doubled in current dollars between 1965-66 and 1975-76. After accounting for the effects of inflation by converting to constant 1975-76 dollars, per pupil expenditures still increased by almost one half, 48.8 percent.

.Contributing to the real increase in expenditures has been the expanding proportion of dollars spent on instruction and fixed charges. Included in instructional costs, the average annual teacher's salary has risen by 10.3 percent in real dollars over the last ten years. Fixed charges (principally payments to teacher retirement funds, social security, insurance premiums, and rent) rose from 6.5 percent of all current expenditures in 1965-66 to 9.9 percent in 1973-74.

The problem of financial support for public schools falls unevenly on rich and poor districts. Many urban school systems have been faced with demographic changes that have compounded the problems of generally rising education costs. Declining numbers of jobs and increasing social and public services have intensified the differentials between urban and suburban areas. While spending for education has increased dramatically in many urban areas, cities tend to spend a smaller share of their total budget on education than do their suburban counterparts.

The costs of providing education are rising, and taxpayers have shown opposition to the growing burden. But at the same time, the public continues to regard education as important. Education remains on the list of domestic areas for which the public believes too little money is being spent.

.In 1964, voters approved almost 75 percent of school bond elections held, or 79 percent of the dollar value of the issues voted on. 10 years later, in 1974-75, the approval rate had dropped to about 60 percent of that figure, when 46 percent of both the number of elections and the value of the bonds won voters' approval.

.A nationally representative survey of public opinion[1] has shown that, consistently since 1973, about half of the public believe we are spending too little to improve the nation's educational system[2].

.A majority of the public in 1976 (52 percent) believed that we were spending too little on improving education. Yet even more of the public believed we were spending too little on improving health (63 percent) and halting the crime rate (69 percent).

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[1] General Social Survey, National Opinion Research Corporation, University of Chicago.

[2] The percentages of all respondents giving this answer were 48.8 percent in 1973; 50.3 percent in 1974; 48.9 percent in 1975; and 50.1 percent in 1976.

3. WHO GOES TO SCHOOL AND WHERE?

Population and Enrollments

The population of school-age groups is a prime determinant of the numbers of persons enrolled in elementary and secondary schools. The declining size of cohorts of young persons of school going age has been the subject of news and comment. The elementary school-age population will continue to decline in size for at least the next five years; the secondary school population has now started to decrease. The following changes will be observed in the future:

- The population of 5- to 13-year-olds has declined from 36,636,000 in 1970 to 33,440,000 in 1975, a drop of almost 9 percent in five years. The size of this age group in the year 2000 will depend upon the numbers of births in the future, with the most likely projection being 35,963,000, as identified by the Bureau of the Census. So enrollments are expected to exceed current levels though probably not reach their 1970 peak.

- The population of 3- to 5-year-olds has dropped by 18 percent, from 12,496,000 in 1964 to 10,185,000 in 1975. By the year 2000, this age group is profected to drop to 8,851,000.

- The population of 14- to 17-year-olds reached 16,934,000 in 1975; by 1980 it will be 15,753,000, a decline of 7 percent. In the year 2000 it is expected to be about 16,752,000.

- The racial composition of the school-age population will also change. Minority groups will make up a larger percent of the elementary and secondary school age populations in 1980 than they did in 1975. In elementary schools, minorities will comprise 17.4 percent of the population compared with 16.2 percent in 1975. Likewise, minorities in the secondary school population will increase from 15.4 percent to 16.6 percent.

These declining population groups have had a predictable impact on elementary and secondary school enrollment, since over 90 percent of the eligible population groups are enrolled in school. In marked contrast to this picture are increasing preprimary enrollments.

- In spite of the 3-to 5-year old population decline, the preprimary enrollment has risen steadily from 3.2 million in 1964-65 to 5.0 million in 1975-76, an increase of 55 percent.

- About 49 percent of both White and non-White 3- to 5-year-olds were enrolled in 1975. This is a 91 percent increase in the preprimary participation rate since 1964.

- Enrollments in public elementary and secondary schools reached a peak of 46.1 million in 1971 and have since declined to 44.6 million in 1976. The decline is projected to continue until 1985 when it should reach a low of 40.0 million.

- The effects of the population decline are being felt differentially by States; however, all but 11 States have now experienced declines in public elementary and secondary school enrollments.

- Nationally in 1974, two-thirds of Black public school students were enrolled in predominantly minority schools (schools with 50 to 100% minority enrollment). The proportion in predominantly minority schools has declined slightly since 1970, from a figure of 70.9 percent. Most of this decline is attributable to a drop in the percent of black students in racially isolated schools (schools with 90 to 100% minority composition).

- According to preliminary 1974 data, in the Northeast more than 57 percent of all Black public school students were enrolled in racially isolated schools (schools with 90 to 100% minority enrollment).

- Black students are least concentrated in racially isolated schools in the South; less than one-fourth were enrolled in schools with 90 to 100% minority composition. This proportion in the Southern schools has dropped from 34 percent since 1970.

Total population declines due to decreasing birth rates of course are only one part of the picture. The distribution of the existing school age population reflects the geographic concentration of the country's population in certain regions.

- The three Middle Atlantic States (New York, New Jersey, and Pennsylvania) enrolled 15.9 percent of all public school students in fall 1975.

- The eight Mountain States (Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, and Nevada) enrolled 5.0 percent of the total public school enrollment.

- Public school enrollments in our largest cities exceed the enrollments in many States. One in 41 public school students is enrolled in a New York City public school.

The mobility of the population is an important determinant of its demands for school services in the future. Mobility patterns show that more young persons moved into the South and West than moved from these areas between 1970 and 1975. This mobility has either accelerated or dampened the effects of declining birth rates on regional population changes.

- Net population changes in 5- to 17- year-olds for the four regions of the country between 1970 and 1975 reflect the influence of migration to the West and South: While the West lost only 1.4 percent and the South lost 1.8 percent, the Northeast lost 5.4 percent and the North Central States, 7.0 percent.

Student Groups with Special Needs

Ambitious reform efforts in the 1960's focused on education as a major means of improving access to the mainstream of society. Since that time, members of many pupil population groups have received a variety of services from programs designed to meet their special needs. Comprehensive, national data on the needs of particular groups and on the types of services they receive has not always been available. Nevertheless, some recent studies provide estimates of the magnitude of special needs on a national level.

- There have been some significant changes in the geographic distribution in the number of children in poverty since 1970. During this period, it appears that children in poverty have become somewhat less concentrated in the South and lower income States, while the more industrialized and higher income States have tended to increase their relative share.

- Of the population 4 to 25 years old, more than one in eight persons resides in a household where a language other than English is spoken as the usual or second language.

- .Spanish is the usual language for nearly half of these 10.6 million children and young adults.

- .The proportion of students identified as having handicaps is larger in the South than in other regions. Over 4.5 percent of public schools pupils in the South were placed in special classes, in 1974, in comparison with 3.5 percent in the Northeast and 3.2 percent in the West.

The Educational System

The postwar baby boom promoted parallel growth in the numbers of school teachers, administrators and other education personnel. The decline in the student population has serious implications for school staff.

- ·Total instructional staff in public elementary and secondary schools (including principals, supervisors, librarians and guidance personnel as well as teachers) reached a high of 2,464,000 in fall 1976. It is expected to decline to 2,368,000 by 1980 and, with some intermediate variation, to increase again to 2,442,000 by 1985.

- ·The number of public elementary and secondary school teachers rose from 1,355,000 in 1960 to 2,155,000 in 1974.

The nationwide shortage of teachers that persisted from the late 1950's through the 1960's had ended by 1970. By 1972 there was a surplus. An imbalance still exists in the market for beginning teachers.

- ·Approximately 70,000 persons prepared as teachers will graduate in the spring of 1977 and fail to find desired employment in the classroom.

- ·The dynamics of the marketplace are slowly responding to this situation; there is a decline in the number of students entering teacher training programs.

In contrast to enrollments and instructional faculty, the number of both schools and school districts have continued to decline over the last 25 years. These phenomena are due primarily to closings of 1-teacher schools and consolidations of school districts in areas where large numbers of school districts were once necessary to serve geographically isolated regions.

- The number of elementary schools, exclusive of 1-teacher schools declined by about 12.9 percent between 1959-60 and 1974-75, from 71,640 to 62,322.

- The number of secondary school changed by less than one percent between 1959-60 and 1974-75, dropping from 25,784 to 25,697.

- The consolidation of school districts has continued with a 30 percent drop in number between 1966 and 1975 from 23,464 to 16,176.

- Many small school districts are still operating. Of the 16,000 school districts operating in 1975, more than three-fourths had enrollments of fewer than 2,500 pupils. Yet only 21 percent of public school students are enrolled in districts with fewer than 2,500 pupils.

Elementary and secondary education have long been provided by both public and private institutions. The distribution of elementary and secondary enrollment in public and private schools changed little between 1968 and 1975. A fairly constant 11 percent of all elementary school children attended nonpublic school between 1968 and 1975. As a percent of the total enrollments in regions, however, private enrollments changed.

- Private enrollment in elementary schools have declined in the Northeast between 1968 and 1975, from 22.9 percent to 15.8 percent of the total for Whites and from 5.5 to 3.8 percent for Blacks. In contrast the Southeast has exhibited gains, from 7.2 to 12.6 percent of Whites and from 1.4 to 2.0 percent for Blacks.

Enrollments in private secondary schools remained at about 8 percent between 1970 and 1975. The private enrollment patterns by region have shown differential changes.

- The largest change in private secondary enrollments occurred in the Southeast, where White enrollment rose from 5.6 to 8.4 percent of the White population living in that region.

The Public's View of Education

Public support for education has been regarded as fundamental to the health of a democratic nation. It is important not only because of the reliance of educational institutions on the public for financial support but also because the climate that it creates for education is communicated to both students and teachers. This climate affects the conditions for education and therefore the quality of education delivered and received. Public opinion is thus an important indicator of the present, and future, condition of education.

In recent years the public has been remarkably constant in the problems it identifies as areas of concern about the public schools. Whether this reflects the persistence of particular problems in the schools or the persistence of the public's perceptions of their importance, the concerns underscore the inseparability of the schools from society's problems.

- Lack of discipline, integration/segregation, and lack of financial support are the three problems that have been most frequently cited each year since 1970 in a national survey.[1]
- In 1976 the frequency with which "poor curriculum" was identified by the public as a problem rose considerably, to occupy third place with "lack of financial" support.
- When asked what schools should do to improve the quality of education in 1976, more than half the adults with children in school responded that more attention should be devoted to teaching the basic skills and enforcing stricter discipline.

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[1] Annual Gallup Poll of the Public's Attitudes Toward the Public Schools, Phi Delta Kappa, October editions.

Table 1.—Estimated revenue and nonrevenue receipts of public elementary and secondary schools, by source and by State: 1975-76

[Amounts in thousands of dollars]

State	Total revenue and nonrevenue receipts	Revenue receipts							Nonrevenue receipts
		Total	Federal		State		Local[1]		
			Amount	Percent of total	Amount	Percent of total	Amount	Percent of total	
1	2	3	4	5	6	7	8	9	10
United States	70,223,126	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Alabama	828,615	808,211	[illegible]	16.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Alaska	242,551	232,510	35,157	15.1	161,210	69.5	[illegible]	[illegible]	[illegible]
Arizona	777,617	763,757	[illegible]	10.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Arkansas	523,376	472,031	73,261	15.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
California	7,013,768	[illegible]	[illegible]	8.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Colorado	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Connecticut	1,056,107	[illegible]	[illegible]	4.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Delaware	214,220	[illegible]	[illegible]	8.8	[illegible]	64.1	[illegible]	[illegible]	[illegible]
District of Columbia	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
Florida	2,177,101	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Georgia	[illegible]	1,155,179	[illegible]	12.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Hawaii	265,278	[illegible]	[illegible]	7.1	[illegible]	[illegible]			[illegible]
Idaho	[illegible]	225,721	[illegible]	10.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Illinois	4,526,723	[illegible]	[illegible]	6.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Indiana	[illegible]	1,601,000	[illegible]	5.7	[illegible]	20.6	[illegible]	[illegible]	[illegible]
Iowa	1,068,405	[illegible]	49,162	4.8	[illegible]	38.8	[illegible]	[illegible]	[illegible]
Kansas	762,978	742,978	[illegible]	11.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Kentucky	839,000	[illegible]	[illegible]	14.6	[illegible]	[illegible]	[illegible]	31.1	[illegible]
Louisiana	1,059,000	[illegible]	[illegible]	17.5	[illegible]	55.7	[illegible]	[illegible]	[illegible]
Maine	316,035	295,035	24,000	8.1	[illegible]	41.6	150,000	[illegible]	[illegible]
Maryland	1,512,560	[illegible]	81,916	5.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Massachusetts	2,067,020	[illegible]	[illegible]	4.1	[illegible]	23.5	[illegible]	[illegible]	[illegible]
Michigan	3,110,000	[illegible]	[illegible]	3.8	[illegible]	51.2	[illegible]	43.4	[illegible]
Minnesota	1,595,000	[illegible]	77,000	5.5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Mississippi	611,585	[illegible]	105,441	21.2	[illegible]	56.0	110,922	[illegible]	[illegible]
Missouri	1,326,365	[illegible]	[illegible]	8.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Montana	251,200	[illegible]	[illegible]	6.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Nebraska	409,840	[illegible]	29,120	7.4	[illegible]	17.6	[illegible]	[illegible]	[illegible]
Nevada	195,300	[illegible]	[illegible]	5.9	[illegible]	40.4	[illegible]	[illegible]	[illegible]
New Hampshire	225,990	[illegible]	12,657	6.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
New Jersey	[illegible]	[illegible]	[illegible]	4.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
New Mexico	390,134	[illegible]	[illegible]	20.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
New York	[illegible]	[illegible]	[illegible]	4.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Carolina	[illegible]	[illegible]	[illegible]	13.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
North Dakota	191,409	[illegible]	[illegible]	7.2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Ohio	[illegible]	[illegible]	[illegible]	6.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oklahoma	757,000	[illegible]	[illegible]	11.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Oregon	725,000	[illegible]	[illegible]	5.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Pennsylvania	4,132,516	[illegible]	[illegible]	8.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Rhode Island	265,497	[illegible]	[illegible]	7.9	[illegible]	35.9	[illegible]	[illegible]	[illegible]
South Carolina	[illegible]	[illegible]	[illegible]	14.7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
South Dakota	195,102	[illegible]	[illegible]	14.5	[illegible]	[illegible]	137,011	[illegible]	[illegible]
Tennessee	[illegible]	[illegible]	[illegible]	11.1	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Texas	[illegible]	[illegible]	[illegible]	10.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Utah	[illegible]	[illegible]	27,153	7.4	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Vermont	[illegible]	[illegible]	[illegible]	6.8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Virginia	[illegible]	[illegible]	[illegible]	11.0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Washington	1,275,000	[illegible]	[illegible]	8.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
West Virginia	521,071	[illegible]	[illegible]	12.3	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wisconsin	[illegible]	[illegible]	[illegible]	7.6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Wyoming	[illegible]	[illegible]	[illegible]	6.9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[1] Includes intermediate sources.

[2] Excludes value of commodities donated by the U.S. Department of Agriculture.

[3] Column 2 includes $[illegible] Federal general revenue sharing.

[4] Column 2 includes $[illegible] Federal general revenue sharing and column 6 includes Federal payment [illegible] estimated to be 27 percent of general appropriations.

[5] [illegible]

[6] Includes $23.5 million [illegible].

NOTE.—Because of rounding, details may not add to totals.

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Statistics of Public Elementary Day Schools, Fall 1975.*

Table 2.—Percentage distribution of school districts, by current expenditure per pupil: 1974-75

State	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Alabama	[illegible]	[illegible]	[illegible]						[illegible]
Alaska						[illegible]	[illegible]	[illegible]	[illegible]
Arizona		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			[illegible]
Arkansas	[illegible]	[illegible]	[illegible]	[illegible]					[illegible]
California		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Colorado		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Connecticut		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
Delaware		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]
District of Columbia						100.0			[illegible]
Florida		1.4	[illegible]	[illegible]	[illegible]				1,116
Georgia	[illegible]	[illegible]	[illegible]	[illegible]					[illegible]
Hawaii				100.0					[illegible]
Idaho		[illegible]	[illegible]	[illegible]	[illegible]				[illegible]
Illinois		[illegible]	[illegible]	[illegible]	11.6	[illegible]	0.5	[illegible]	[illegible]
Indiana	1.4	[illegible]	[illegible]	[illegible]	0.4				[illegible]
Iowa		1.1	72.9	26.0					1,054
Kansas	0.1	5.4	40.9	27.1	14.4	11.0	1.5		1,213
Kentucky	55.9	32.0	4.3	7.7	–			–	675
Louisiana	1.4	49.8	37.6	11.3	–		–	–	895
Maine	11.4	51.9	21.4	3.7	11.6		–		855
Maryland	–	4.2	20.8	62.5	8.3	4.2	–		1,126
Massachusetts		2.0	23.6	50.9	13.8	5.8	2.6	1.4	1,219
Michigan		9.9	39.7	22.7	10.5	16.4	0.8	0.2	1,032
Minnesota		1.0	13.6	44.5	28.6	8.1	–	0.2	1,211
Mississippi	46.6	52.0	1.3		–		–		704
Missouri	5.6	24.5	42.1	25.2	1.4		0.1	0.3	968
Montana	2.0	22.0	8.0	30.4	11.8	12.8	7.1	6.0	1,255
Nebraska	15.8	22.1	22.6	9.3	10.2	7.1	4.1	8.1	1,024
Nevada			32.5	39.0	28.4		–	–	1,140
New Hampshire	–	52.5	25.0	14.8	6.0	–	–	–	857
New Jersey	0.2	6.4	19.9	23.9	18.7	23.9	2.0	5.0	1,339
New Mexico		20.2	30.2	12.0	14.8	22.7		–	1,109
New York		–	–	4.5	14.6	47.4	9.0	24.6	1,659
North Carolina		40.8	55.6	3.5	–	–	–		914
North Dakota	8.6	11.0	41.4	26.3	5.8	2.9	–	–	1,026
Ohio	1.8	55.9	29.3	5.6	2.6	1.0	0.2	0.5	840
Oklahoma	19.7	45.0	14.1	7.7	0.6	1.8	11.0	–	602
Oregon		3.2	27.5	19.8	37.3	11.3	0.3		1,293
Pennsylvania		7.6	56.2	30.4	1.5	2.6	0.9	–	1,066
Rhode Island			11.7	59.8	23.9	4.7		–	1,238
South Carolina	15.3	82.2	2.5			–	–		714
South Dakota	0.3	16.0	51.6	16.0	11.0	3.1		2.3	935
Tennessee	69.1	22.7	5.4	1.7	0.8		–		668
Texas	10.1	44.8	25.5	4.2	2.5	8.3	0.1		895
Utah		29.1	32.5	11.4	27.0		–		1,032
Vermont	5.4	27.0	43.6	15.2	10.8	3.3	2.4		986
Virginia		71.5	20.5	5.6	–	0.8	1.6		834
Washington		1.4	13.3	59.7	19.4	1.5	3.7		1,174
West Virginia	3.4	67.4	29.2						858
Wisconsin		0.4	21.8	50.1	15.9	6.5	1.5		1,205
Wyoming		–	29.5	25.0	13.1	21.3	1.6	11.5	1,383

SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *Education Directory, 1974-75: Public School Systems*; and preliminary data.

Dr. GOLLADAY. In my prepared statement I have outlined some of the key dimensions of the elementary and secondary education enterprise in this country and the ways they have changed over time by reviewing the evidence available to answer three questions frequently asked of the educational system:

What are the results?

How much does it cost?

Who goes to school and where?

In looking at outcomes, costs, participants, and institutions, I want to emphasize the importance of as broad a view of education as possible—therefore demographic and economic and social trends are important, as is public opinion.

I have presented the supporting statistics in my statement. What I would like to do now is highlight a few of the major trends and point out the components of some of them.

Outcomes: Looking first at outcomes, it is appropriate to begin with the high school graduation rate—actually the ratio of high school graduates to the population of graduating age. This ratio is important because high school graduation has traditionally signalled completion of a basic education. The ratio rose steadily from the turn of the century until about ten years ago, when it leveled off at 75 percent. There has been very little change in the ratio nationally since then, suggesting that our progress towards giving all young people a basic education has slowed considerably.

High school dropouts—persons who are not enrolled in school and not high school graduates—remain a substantial problem. The proportion of white youth who may be classified as dropouts is about ten percent. For blacks, the proportion is almost double that—about 19 percent. For persons of Spanish origin, the dropout varies, again as we saw earlier, depending on the language characteristics of the youth and of the household, from as low as 14 up to as high as 45 percent.

I think there is growing concern that school enrollment, even high school graduation, does not always constitute learning that is regarded as adequate to function as an adult.

Now, certainly a part of this concern derives from the attention that is being focused on the declining averages of scores on tests which are designed to predict college success. There is now a great deal of information available that does permit us to draw some more detailed profiles of the performance levels of particular groups within our population, and results from the study that is termed the National Assessment of Educational Progress, for example, shows that achievement in certain areas in the population is rising and in some areas it is declining.

In the technological field, we find that achievement in science is generally on the decline. However, the science knowledge of youths who are living in rural areas has increased. Also the science knowledge of nine-year-old black students in the south has increased. If we turn to reading performance, we find generally the reading performance of youth increased in a four-year period recently. The average percent of black nine-year-olds answering reading items correctly increased almost five percentage points, while the average reading performance of whites increased just a little over a percentage point. However, I think it is important to point out that there still is quite a large gap between the reading performance of whites and blacks, though that gap is narrowing.

In examining changes in writing skills, we see that students of junior high and high school age have shown a general decline in their ability to use language and their ability to write coherent paragraphs. Only the nine-year-old's papers showed a general increase in writing ability. The concern over performance is clearly reflected, I think, in the actions that have been taken in 29 states now, to design, to implement or actually to install a state level program of performance-based education, either to use this performance base as the criterion for a promotion from one grade level to another or as the basis for high school graduation.

We will turn now to costs. Our education institutions in this country, elementary, secondary and higher education, spend a sum just under eight percent of our gross national product. This is more than we spend on defense. The spending of our schools has increased dramatically, of course, as it follows the population increase. It is expected to continue to increase into 1980 due to some of the factors Mr. Doyle has already pointed out to you—the overhead and some of the fixed costs that are not tied directly to school enrollments.

If we turn to shares of the support for public education, we will notice that the Federal share almost doubled between 1961-62 and 1969-70. It rose to 8 percent at that time. However, that share has stayed at about eight percent over the last few years. While the state's share has traditionally been smaller than the local share, that picture is changing, largely in response to the reform of school finance programs and we now note that in 22 states the state funds actually contribute half or more of the funds going for public education in states.

I would like to call your attention to a table at the end of my testimony which outlines the shares of support for education from the Federal, from the state and from the local sources for each of the States.

It has also been observed that the problems of the support for schools fall unevenly on some districts that are rich and some that are poor. Urban areas in particular have been hard hit. They may be facing losses in jobs and population, increases in the percent of low income households and increasing demands for other types of public services.

The attitude of the public toward spending on education is clearly mixed. The voters approved fewer than half of the bond elections in a recent year, down from the three-fourths approval rates a decade earlier, and yet in contradistinction to this, a majority of the public has stated in each of the last five years that we are spending not enough on improving the nation's education system. So here we have two opposing views.

If we turn to participants and outcomes: I think that the declining size of cohorts of young persons of school-going age has certainly been discussed and presented for you this morning. This decline is expected to continue at least until 1983, and all but 11 states have now exhibited a decline in the numbers of total students at elementary and secondary levels. The interregional migration patterns have had the effect of either speeding up or slowing down this enrollment change pattern by region. In marked contrast to this picture of declining enrollments are the increases that we see in enrollments in preprimary education. Both in terms of numbers and as a percent of the population, there has been dramatic increases in preprimary enrollments, an increase from just over 3 million a decade ago to 5 million in the most recent school year.

The ambitious reform efforts that we saw that focused on education as a major means of improving access to the mainstream have also generated, I think, interest in data on the needs of particular groups of the population. We have realized how important those data are. Most recently we have acquired some data on the populations of young persons in poverty, and those who have special needs as a result of their language backgrounds.

Among other findings we now are able to say that there have been changes in the geographic spread in the numbers of children in poverty. Children in poverty are not now as concentrated as they once were in certain states in the South and other low income states, and the more industrialized and higher income States now have tended to show an increase in the relative share of children in poverty. So there really has been a leveling, and this was also pointed out earlier.

Another result that you also saw earlier, that I would like to pick up on again, is that of the population, age 4 up to 25, there is more than one child in eight who is from a household where a language other than English is spoken, either as a first language or as the other language.

The proportion of students identified as having handicaps is another one of those statistics which varies by region, and according to our most recent results, this proportion is larger in the South than it is in other portions of the country.

The trends in the size of the school-going population are clearly going to have profound effects on our schools in the future, and a number of these effects have already been mentioned for you and I won't repeat them. Clearly, the impact on the teacher supply and demand is major. While we know that the dynamics of the marketplace are slowly responding to the oversupply of teachers which currently exists, there still is a major imbalance in the existing market for beginning teachers.

In contrast to the enrollments and the faculty decline, the number of schools and districts has also continued to decline over the last 25-year period, not just recently. These declines are due primarily to the closing of the one-teacher schools and to the consolidation of school districts to form larger districts, especially in the plains states.

As we look at enrollments over time, we find that the distribution between public schools and private schools has remained fairly constant as a percent of the population at the elementary level and at the secondary level. However, if we look at those changing patterns by region, there are some very interesting changes that are occurring. In the Northeast in elementary schools we see that private enrollment is declining, both among white students and among black students. The enrollment or the trend twoards private schools is increasing, however, as we turn to the Southeast.

I have closed my prepared statement with some statistics which trace the opinions of the public towards the public schools. I think the public opinion is a very important factor in looking at our schools. Not only is the public important because of the reliance of our educational institutions on them for their dollars, but also because the climate that public opinion creates for education, I think, is communicated to both the students and the teachers.

In recent years the public has been very constant in its expressions of problems which it believes are areas of concern to the public schools. A lack of discipline, integration, and the lack of the financial assistnce are the three problems that have been mentioned each year for a number of years now. When asked just in this last year how the schools should improve the quality of education, I think it is important to note that more than half of the adults with children in school spoke in response that they felt more attention should be devoted to the teaching of basic skills and to the enforcement of stricter discipline in the schools.

That concludes my brief abstract of my remarks. I would be happy to answer any questions.

Mr. **Le Fante**. Thank you, Dr. Golladay, for your very informative testimony. I am sure we are going to make good use of the information.

I would like to take this opportunity, if I may, to welcome Chairman Perkins to this morning's hearings. He has been very, very busy with many of his other duties.

Chairman **Perkins**. I personally wish to compliment all of you distinguished witnesses on this occasion. I have been looking here at the statement of Mr. Doyle. Your testimony suggested that states use the opportunity of declining enrollments to equalize their expenditures among poor and rich school districts. Could you expand on that, especially on your remarks that poorer school districts will be hurt more by declining enrollments than rich districts?

Mr. **Doyle**. First, Mr. Perkins, let me answer the question in reverse sequence. Poor districts frequently because of their low tax wealth are forced to rely much more heavily upon State apportionments for income for education, and states are typically geared to student counts, so that each child that uses the district and each increment in enrollment decline occurs, a proportionate amount of state financing is also lost to the district. In that case the poor district with the low tax base and heavy state reliance is caught in a very difficult squeeze.

Capital costs are not sensitive to student enrollment declines. They still have to keep the buildings, have to pay off the bonded indebtedness. You can't fire teachers, if that is your desire, as rapidly as students leave. Even if attrition reduces the number of teachers fairly rapidly, it will cause a skew towards a higher paid teaching force because in most states teachers' salaries are based on years of experience and the more mature teaching force is a more expensive than a younger teaching force, so for a variety of factors the cost squeeze induced by declining enrollment hits the poor with much more impact than the wealthier districts.

Now in the case of using a declining enrollment bonus to secure equalization, a state, as is the case in Iowa, which is willing to essentially retarget the monies that the state is saving by the declining enrollment to the poorer districts, and then bring about equalization, which is what Iowa did, as the number of children declined statewide, the state per capita expenditures were no longer required, so the state had some financial flexibility in terms of retargeting that funding, and there will be some variations from state to state. I don't believe that all states can do as Iowa did, but it does seem to suggest a strategy of school finance reform with capitalizing on declining enrollment.

Chairman PERKINS. Now, Mr. Coates, you mentioned that there could be a decline of 25 percent in high school enrollment in a few years.

What can we do at the federal level, or what should we do at the federal level, to prepare for that 25 percent decline in enrollment?

Mr. COATES. Mr. Chairman, I think that the principal need that comes out of looking at all the demographic factors in their complexity is that the principal planning needs are at the state and local levels, and one legitimate Federal mission it seems to me would be to prepare case material, and instrutional material on how to plan demographically.

Secondly, the Federal agencies, notably through census and other agencies, could do much to prepare better and more reliable and timely data.

The third factor would be, and this is almost trivial, but it hasn't been done and it would be useful, to hold a conference directed at state and local level officials on the state of the art of demographic forecasting, and how to use it. Coupled that with case material and how to do the material this could be quite effective.

I think that there are probably other initiatives that could be taken. More direct financial support of demographic skills at the state level. In view of the diversity within any complex state, and most of them are complex, it would be appropriate to have demography supported at the district or the municipal level, and to have some mechanism at the state level whereby this information was brought together, the rough edges rounded off and made generally specifically useful. I would picture encouraging the use of this forecasting technique at the local level with the State perhaps performing an integrating function.

Chairman PERKINS. Let me ask you this: How can you arrive at that figure, in view of the continuous increase in population in this country, that there is going to be a decline of 25 percent in high school enrollments? I know you have presented all these charts and I am going to study them, but just give me briefly an answer to this.

Mr. COATES. I think the briefest answer is that if you are born now, already born, or have been born in the last 14 years, one can anticipate with very high reliability at what age you are going to enter the high school system, and so for the next 14 years we have almost absolutely reliable information about the high school age group. Those children are already born, and hence we can anticipate with high reliability their entry into the school system. The one factor that might perturb that would be any major economic shifts in the country such that either a greater percentage or a significantly different percentage of students chose to remain in high school. That might perturb the total population, but basically we are dealing with children already born.

Furthermore, we can even go past those numbers of children who are already born, and recognize that historically, while there can be quite dramatic shifts in fertility rates, in birth rates, they don't shift dramatically in only 1 or 2 years, so that we have an additional couple of years of high reliability.

Chairman PERKINS. How many years do you anticipate? You are anticipating we will decline 25 percent from today's enrollment in high school.

Mr. COATES. If you turn to the report in front of you the proper figure appears on page 7. The black line there on that figure shows steady decline out through 1987-1988, and if one takes the most likely assumption, the Series 2 assumption about fertility rates, that decline will continue to about 90 or 91. That is the age group 14 to 17.

Chairman PERKINS. Thank you very much.

Mr. LE FANTE. Thank you, Mr. Chairman.

Mr. Murphy.

Mr. MURPHY. Thank you, Mr. Chairman,

I think first I will ask Mr. Doyle this. You mentioned declining enrollment, and do you substantiate what Mr. Coates said, that this may level off in 1987-1988? Would that be the same thing for general enrollment in high school? When do you think it will level off? We are going to reach a point where we will no longer decline in student population. When will that be?

Mr. DOYLE. I think Mr. Coates' information is probably more recent than mine, Mr. Murphy. We haven't looked pretty much ahead of 1985, but the demographers suggest that there will be a leveling off at that point in time.

Mr. MURPHY. Do you think we will continue to drop until 1985? Your figures or statistics will show a continued drop in enrollment through 1985?

Mr. DOYLE. Yes, with a slight bulge at that time again in the elementary level, and a continuing plateau after that point in time.

Mr. MURPHY. Now I will ask Dr. Golladay, in view of those statistics, Doctor, to what do you attribute the increase in preprimary enrollment? We seem to be enrolling more in preprimary and yet we are having a decline in enrollment.

Dr. GOLLADAY. Yes, and it is an interesting phenomenon because the actual population of the 3- to 5-year old age group that is involved in preprimary enrollment—

Mr. MURPHY. Is dropping?

Dr. GOLLADAY. —yes, is also declining, and yet there is an absolute increase in the number of children enrolled each year. So obviously the participation rate is increasing almost astronomically. I think there are a number of reasons for the decline and I think that Mr. Coates' presentation pointed out a number of them.

First of all, I believe that the Head Start program and phenomenon is an important ingredient here.

Mr. **Murphy**. Yes.

Dr. **Golladay**. I think there is a belief that early educational opportunities are extremely important. I think add to that the phenomenon of the increasing participation in the labor force, of the women who have children and I think those factors together are probably responsible for the majority of that increase.

Mr. **Murphy**. Just as a matter of information for Mr. Doyle. You may want to check the most recent school formula proposed in the State of Pennsylvania where they are now taking into consideration the poorer districts and the decline of enrollment. They have established new formulas, as I understand it, and recently introduced it in the legislature to overcome that, so that, for instance, in Philadelphia, they will receive a substantial increase next year in state subsidies even though they are suffering most from decline in enrollments. That might be interesting for you.

Mr. **Doyle**. Yes. Thank you very much.

Mr. **Murphy**. Thank you, Mr. Chairman.

Mr. **Le Fante**. Mr. Kildee.

Mr. **Kildee**. Thank you.

I don't have a question but a comment.

Michigan is suffering from this problem also. The Michigan Legislature in which I served has tried to address itself to it by giving some extra dollars to help cushion the effect of declining enrollment because you really can't gear your costs down at the same rate as your enrollment declines for a variety of reasons. For instance, when you lay your teachers off, of course you lay off those who have less seniority and less pay, so we did work into the formula in Michigan some financial help to cushion that decline in enrollment.

On page 8 you mentioned that high wealth districts are likely to enjoy a bonus, while low wealth districts may be extremely sensitive to decline, and that certainly is the case. You also indicated that state legislators need an accurate and extensive data base. They also need courage because the first bill in which we gave some help for declining enrollment in Michigan for those districts that didn't have a large wealth base did not pass. It is a problem, and one of the ways that we have addressed it is to help cushion that blow with dollars as they go through that period of decline.

Mr. **Le Fante**. Thank you, Dr. Golladay.

I notice just as a point of information, on page 13 of your testimony reference is made to the proportion of students identified as having handicaps is larger in the South than in any other region.

Can you define"handicap" for us as you use it in that context?

Dr. **Golladay**. To give a precise definition I would like to insert that into the record by reference to the study itself, but I believe that a handicapping condition is something that can be definitely identifiable which interferes with that person's either motor skills or learning abilities. I will place in the record the precise definition of handicapped as it was used in that study.

[The information referred to follows:]

GENERAL ISSUES IN ELEMENTARY AND SECONDARY EDUCATION
Tuesday, May 10, 1977

Mary A. Golladay
Definition of handicapped:

Four categories of handicapping conditions were used in the study cited, which employed the 1973 OCR Survey of Schools data on pupils in LEA programs for handicapped pupils. In brief, the categories were:

Educable Mentally Retarded (EMR) - children with IQs below 75 or 80.

Trainable Mentally Retarded (TMR) - children with IQs of less than 50.

Special Disabilities - children with physical handicaps including blindness, deafness, speech impairment, orthopedic handicaps, learning problems caused by neurological disorders, or with specific learning disabilities.

Other - children who are identified as needing special programs for slow learners, the severely emotionally disturbed and the socially maladjusted.

SOURCE: U.S. Department of Health, Education, and Welfare, Office of Assistant Secretary for Planning and Evaluation, Analysis of 1973 Participation of Handicapped Children in Local Education Programs, September 15, 1975

Mr. **Le Fante**. Can we assume that it is a combination of physical and emotional handicaps?

Dr. **Golladay**. It may be that. A handicap may be either emotional or physical or in some cases both.

Mr. **Le Fante**. That is a very high percentage, over 4.5 percent.

Dr. **Golladay**. Yes, it is.

Mr. **Le Fante**. Extremely high.

Dr. **Golladay**. I think there are problems in the definition of persons who are handicapped, and these problems are going to become more acute in the future as aid is made available for students who have handicaps. There always have been problems in identifying them, in many cases defining what lies outside the range of normal variation in abilities and emotion patterns, and becomes a handicap.

Mr. **Le Fante**. Do you think the system as it exists today is doing all it can to identify these handicaps at an early stage?

Dr. **Golladay**. I am really not aware of the various diagnostic programs and school programs that are going on, so I really feel that I don't have the expertise to answer that.

Mr. **Le Fante**. It would be interesting though to follow up on something like that.

Dr. **Golladay**. Very much so, and I know that among the mandates for data for special population groups, there have been additional requests for data on the handicapped population. I think in the future we will be having better information as to the extent of these problems and their incidence.

Mr. **Le Fante**. Thank you, Dr. Golloday. I have no further questions.

I want to thank the panel once again. We certainly appreciate your testimony. You can rest assured that everything you have presented today will be very seriously considered in our review. Thank you.

The committee stands adjourned until 9 o'clock tomorrow morning.

[Whereupon, at 11:10 a.m., the subcommittee was adjourned, to reconvene at 9 a.m., Wednesday, May 11, 1977.]

[Additional material submitted for the record follows:]

MONTE VISTA PUBLIC SCHOOLS
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1444 HUXLEY AVENUE
MONTE VISTA, COLORADO 81144
(303) 852-5996

DR. JOHN H. HOLCOMB
Superintendent

DR. LARRY HUXEL
Assistant Superintendent

17 January 1977

Congressman Carl D. Perkins
Chairman
Committee on Education and Labor
U.S. House of Representatives
Rayburn House Office Building
Washington, DC 20515

Dear Congressman Perkins:

In December 1968, you asked me to respond to a questionnaire concerning various aspects of the federal government's relationship to local education. I was most pleased to do this, and over-reacted with a four page, single spaced, letter to your office expressing my concerns. Now, almost ten years and several administrations later, I would like to again react to those same questions.

As you know, I had planned on being in Washington to present testimony later this spring, but with local finances the way they are, I find this impossible. I hope you will accept this in lieu of that personal testimony.

I will attempt to keep my comments in the same order in which you asked the questions in 1968. I feel that the questions are still valid, though the answers keep changing.

1. I still feel that the federal government is providing at least its share of funds to public schools. I have the same nagging doubt in my mind that these funds are having a real impact on the quality of education offered at the local level. I think more local accountability is required, but I think the main problem lies in the proliferation of guidelines and regulations being written by the bureaucrats, when they are writing in their own personal opinions, biases, and interpretations of what the law should be. Some darn good federal legislation has been irrevocably screwed up as a result of these guidelines.

2. I am still convinced that ESEA is potentially the most powerful piece of legislation ever written into federal law for the purpose of assisting and improving local school districts. It has become such a bulky administrative program, that many school districts are wondering how they can gracefully back out of it.

The paper work involved is still prohibitive for many of the districts for which the act was passed; the poor district or the small district. Neither of these districts can afford a person skilled in writing federally funded programs. Thus, the larger districts and the more wealthy districts, with their specialists in "grantsmanship", apply for and receive the additional funds. Another example of the rich getting richer.

3. The late funding portion of ESEA has pretty well been taken care of. The "forward funding" concept introduced within the past few years has helped immeasurably, not only in allowing us to know what funds we can anticipate, but also in the development of some long-range programs.

   ESEA, with its restrictions on the use of personnel involved in those programs, has gotten into the area of local negotiations and collective bargaining. One of our real sore spots is that our Title I aides cannot perform the duties as do all of the other district aides. This is causing a real morale problem among those aides and among our teaching staff. I recognize the general intent to keep these aides from becoming playground supervisors, cafeteria-keepers, and other general-purpose employees, but at the same time it would seem that they should pull their share of duties. Not only are they not pulling those duties, but they are flaunting that fact in the face of other teachers and aides who are required to perform those duties. Again, this causes a real morale problem.

4. I still don't feel that the federal government should have a hand in determining local salaries. This is one of the last areas of control truly left to local boards of education. I would encourage the block-grant concept, which would allow local boards of education to place these funds where they feel they are needed. This might very well include an improvement in local salaries.

5. That question alluded to the explosing of the paper work involved in federal programs, and I think I answered that above.

6. We still have no successful method of disseminating successful educational innovation, particularly, in those matters regarding more economic delivery systems. As I am sure you are aware, Congressman Brademas has proposed a "county extension agent"-concept regarding the dissemination of successful educational innovation. I sent him a copy of the letter I had written to Commissioner James Allen in 1969 with that same recommendation. As I stated in my letter to you of December 6, 1968, we cannot depend on the printed word to transmit all of our new ideas. Next to thought-transmission, this is probably the least effective method of communications we have.

7. PL815-874, at least in our state and in many others, is no longer a viable concept. As states have developed a power-equalization program or other methods of equalizing the state per pupil cost, those districts which are receiving "B"-funds are receiving a bonus which other districts do not enjoy. I think

that for several years there was certainly a need for impact aid, otherwise districts with heavy impact could not have survived. I am acutely aware of this in that I have worked in districts which counted on impact aid for their survival for many years. Later, it was one of the programs I supervised as Supervisor of Federal Programs for the Colorado Department of Education.

Those were basically the points to which you had questions. After I answered your questions, I went on to make some recommendations. I would offer many of the same recommendations, though amended through additional information and experience:

1. I still feel that a study of the Office of Education is needed to see where it can be cut. The question in 1968, and the question in 1977, is not centralization versus decentralization, but rather, in which areas are there duplications over-lapping, or areas which are so bureaucratically oriented that multi-departmental approvals are needed before a project can be funded.

2. I had recommended the separation of education from labor so far as a congressional committee is concerned. I would reverse that recommendation, and feel that, with the present make-up of congress, I would much prefer to see that committee remain in tact.

3. I am still in favor of "competitive" programs to encourage educational excellence. I think that the "county extension agent"-concept might be of great significance in this area. If that office were handled properly, a district could submit an abstract, on a standard form, of a proposal and be told by the federal agency whether the idea should be further developed or dropped. If the idea had merit, the federal agency could provide assistance to the local district in writing to complete the proposal. There are a number of other such field-oriented activities that such an office could provide.

4. I am, more than ever, convinced that programs involving economic educational procedures should be encouraged and funded. Most of these will require changing current educational patterns. Because of the risk of failure involved, local boards and administrators are reluctant to spend local funds for these ventures. I refer specifically to such projects as community schools, education for the aging, day-round and year-round use of schools, flexible and modular scheduling which would permit instruction to be geared to the attention span of kids, the use of experts other than certified teachers for instruction, providing educational experiences outside the rather sterile atmosphere of the school building, and dozens of others. Again, in this respect I feel that the "county extension agent" could be of great value.

Again, I am sorry that I will be unable to testify personally before your committee this year, and hope you will accept these comments in lieu of that testimony.

Sincerely,

John H. Holcomb

JOHN H. HOLCOMB

JHH/jr

PART 1: GENERAL ISSUES IN ELEMENTARY AND SECONDARY EDUCATION

WEDNESDAY, MAY 11, 1977

House of Representatives,
Subcommittee on Elementary, Secondary
and Vocational Education,
Committee on Education and Labor,
Washington, D.C.

The subcommittee met, pursuant to adjournment, at 9:05 a.m., in Room 2175, Rayburn House Office Building, Hon. Ronald M. Mottl presiding.

Members present: Representatives Perkins, Miller, Mottl, Kildee, Buchanan and Pressler.

Staff present: John F. Jennings, Majority counsel; Nancy Kober, staff assistant and Christopher Cross, senior minority education consultant.

Mr. Mottl. The subcommittee will now come to order.

Chairman Perkins will be here very shortly. On his behalf I am going to read his prepared statement.

Today's hearing is the second day of foresight hearings on elementary and secondary education. Yesterday we focused on demographic trends affecting elementary and secondary education, with a special emphasis on those showing very substantial declining enrollments within the next five to ten years.

Today we will focus on what we know about the level of academic achievement presently existing among students, with an emphasis upon learning what we can do from national test data, upon trying to ascertain whether less emphasis is being placed upon learning the basic skills, and upon the merits of competency-based education.

Yesterday, Dr. Golladay from the National Center of Education and Statistics told us that we could not make any ready generalizations about a decline in student achievement nationally because the data available to the National Center showed very mixed results regarding student achievement. It would be very helpful today if all of you could address yourselves to that point and then proceed with your testimony.

We are very fortunate to have with us this morning three outstanding gentlemen who will supply some very important information to the subcommittee.

First of all, we have Dr. Verne Duncan, Oregon Superintendent of Public Instruction; Dr. Roy Forbes, Director, National Assessment of Educational Progress; and Dr. David E. Wiley, Co-Director, ML-GROUP for Policy Studies in Education, CEMREL, Inc.

We also have my learned colleague from Oregon, Congressman Robert Duncan, here no doubt to introduce his distinguished guest, Dr. Verne Duncan.

So, without further adieu, I would like to introduce my colleague from Oregon as one of the outstanding members of the House of Representatives to introduce Dr. Duncan.

STATEMENT OF THE HON. ROBERT B. DUNCAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OREGON.

Mr. Duncan. I am delighted to be here this morning to introduce Verne Duncan, my namesake. I suppose we are distant relatives, but related or not, with a name like that he can't be all bad.

We have appeared on the same ballot together in Oregon; we mutually reinforce one another. I think you will find him very competent and I understand he is going to testify about another aspect of the Oregon Plan.

Now, the Oregon system, as we call it in Oregon, is somewhat like the Duncan plan. It, by definition, is the perfect solution to every impracticable problem. Dr. Duncan I am told is going to testify this morning on a particularly revolutionary concept in education that we have in Oregon and that is that when a youngster graduates from high school and receives a diploma, that he has achieved a degree of competency and a degree of education that is somewhat consistent with the certificate that he is given.

I commend to you and to your committee and to your staff Dr. Duncan and the testimony that he is about to give you.

Thank you for letting me be with you.

Mr. Mottl. Thank you very much, Congressman Duncan. It is a pleasure to have you before the subcommittee.

Dr. Duncan, what we are going to do is have brief statements by yourself, Dr. Forbes, and Dr. Wiley, and then we are going to get right to the questioning. I notice that your testimony isn't too long, so if you care to read it, or give your testimony, you may proceed. I think it would be appropriate though if we have the other two gentlemen testify first if you don't mind.

Why don't we have Dr. David Wiley testify first and then we will have Dr. Forbes and Dr. Duncan, in that order?

You may proceed, Dr. Wiley.

[The prepared statement of Dr. Wiley follows:]

Statement to the Subcommittee on Elementary,
Secondary, and Vocational Education

Committee on Education and Labor

House of Representatives

Congress of the United States

May 11, 1977
Washington, D. C.

This statement was prepared by
David E. Wiley and Annegret Harnischfeger
Co-Directors
ML-GROUP for Policy Studies in Education
CEMREL, Inc.
Chicago, Illinois

Mr. Chairman and members of the Committee, let me first thank you for the opportunity to appear before this Subcommittee, to address such an important matter. Student achievement, in terms of our goals for pupils, the ways we try to bring them about, and the manner with which we assess our accomplishments, is, fundamentally, the most important issue in American Education.

I am David Wiley, a co-director of the ML-GROUP for Policy Studies in Education of CEMREL, Inc. I am also an Associate Professor of Education and of Behavioral Sciences at the University of Chicago, currently on leave of absence. CEMREL is a regional educational Laboratory, primarily supported through the National Institute of Education, with headquarters in St. Louis. Our GROUP engages in educational research and is located in Chicago. We are devoted to the study and clarification of issues relating to educational policy and practice.

In late 1975, our GROUP, with the support of the Ford Foundation compiled an interpretive summary of facts and information concerning national test score changes, their possible causes and consequences[1]. Since that time, we have continued to reflect on that compilation and on new information and have sharpened our interpretations and conclusions. Today, I will discuss these facts, their interpretation, and our conclusions.

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1. A. Harnischfeger and D. E. Wiley, Achievement Test Score Decline: Do We Need to Worry? St. Louis: CEMREL, Inc., 1975.

Achievement test scores rose steadily up to the mid-sixties and have been declining since. The declining trend coincides with large increases in educational expenditure, while enrollments are beginning to decrease. Is the money misspent? Are the reported declines artifacts or unimportant? The concern is nationwide. Many districts and schools have abruptly turned "back to basics." Others ignore achievement test scores because they consider them invalid indices of educational attainment. If the declines are real, what is wrong with American education and what changes are needed? We have analyzed achievement test score data and assessed the evidence.

1. The Evidence: Tests and Scores

The facts about achievement changes are the following:

Since the mid-sixties, declines have occurred:

Scholastic Aptitude Test. SAT scores (11th and 12th grade) have dropped for males and females in both verbal and mathematical sections.

American College Tests. ACT scores (11th and 12th grade) have dropped in English, mathematics and social science for males and females.

Minnesota Scholastic Aptitude Test. High school juniors' test scores (11th grade) have declined.

Iowa Tests of Educational Development. ITED scores have declined in all areas for grades 9 through 12 in the State of Iowa.

Iowa Tests of Basic Skills. ITBS national norm data indicate drops in language, mathematics and reading. State of Iowa data from grades 5 through 8 show declines in all areas.

Comprehensive Tests of Basic Skills. CTBS national norm data show declines in mathematics and reading from grade 5 and language from grade 6 through 10.

National Assessment of Educational Progress. NAEP data show declines in science at each age level and in writing at ages 13 and 17.

No trends have been found:

ACT Science test (11th and 12th grade).

Preliminary Scholastic Aptitude Test (PSAT: 11th grade).

ITBS State of Iowa data for grade 4.

CTBS national norm data for grade 5 reading and language in grades 3 and 5.

Increases have been detected:

NAEP literacy for 17-year olds and writing for 9-year olds.

ITBS State of Iowa data for grade 3 in all areas.

CTBS national norm data for grades 2 and 4 in reading, language, and mathematics and grade 3 in reading and mathematics.

Stanford-Binet. Norming data between the 1930's and 1972 show a dramatic rise.

Metropolitan Readiness Tests. These scores have risen for pre-first graders.

Up to the mid-sixties, achievement test scores steadily increased. Since then, scores have been declining in all tested achievement areas for grades 5 through 12, with more dramatic crops occurring in recent years and being most evident for higher grades. The declines have been most pronounced in verbal tests and therein for college-bound females. There is no evidence for declines at younger ages and in lower grades (grades 1, 2, 3, and 4), but perhaps there are increases. Today's first-graders enter school with more developed skills, such as knowledge of letter names, numbers, and word meaning, than their counterparts of the mid-sixties.

Our analyses indicate that these findings are real, not artifacts and that they describe a national phenomenon. And this great generality of the phenomenon draws our concern.

The fact that achievements measured in higher grades have declined more than those measured in lower ones reflects differences in content tested as well as the ages of the test-takers. For example, large declines have generally been observed in most verbal-oriented tests except those given in the lower and middle elementary grades. However, the latter primarily measure decoding, word-structure, basic vocabulary, and simple comprehension skills, i.e., literacy, while the tests used in later grades are oriented toward comprehension and interpretation of more complex textual materials. The only increases in verbal skills that were found for higher grades (11th and 12th; National Assessment of Educational Progress, in 1971 and 1974) correspond to those simpler skills measured by standardized tests in elementary school. Our straightforward interpretation is that "basic" reading skills are increasing but more advanced ones are declining. Moreover, the grade-level discrepancy -- large declines in the highest grades, and no declines for the lowest -- holds for other areas, not mearely for verbal skills, and those results also indicate differences in test content.

2. Changes in Tests and Test Takers

Are the declines merely spurious, resulting in arbitrary changes in the tests or changes in the kinds of pupils who have taken the tests?

2.1 Changes in Tests

We found only small changes in content, and our firm conclusion is these changes could, by no means, account for the large declines which were observed. However, other changes occur in tests which are not merely modifications in the content but have to do with their scoring and scaling. One test series which has a very complex scaling method is the Scholastic Aptitude Test (SAT). Investigation strongly indicates that there have been large drifts in the scaling of this test. However, these scaling chnages have not caused the decline. In fact, they have hidden about one-fifth of the verbal and one-fourth of the mathematical declines.

2.2 Changes in Test Takers

If there have been no changes in tests which could account for the decline, what about changes in the groups who have taken the test?

Females. Some observers, for example, have attributed part of the decline for the college-bound to increasing proportions of more poorly prepared females entering college. It is definitely true that the scores of females have declined more rapidly than those of males, especially in verbal areas; however, given the large magnitude of the total decline, the sizable male decline and the marginally greater female one, one must conclude that this factor could only account for a small part of the total.

SES. Has the socio-economic composition of those who have taken the college entrance tests changed? No, the socio-economic composition of those who take the Scholastic Aptitude Test has over the last five or six years been almost identical with that of all college entrants. And the family income of this group, adjusted for inflation actually increased almost 9 percent during a period of dramatic test score decline (from 1967 to 1973). Given the strong correlation between achievement and family income, this change would affect scores favorably. Thus, these trends cannot account for the declines.

Racial Background. The racial composition of the tested groups (SAT) can be considered stable over the past four years for which such data were available. Thus the often advanced explanation that higher percentages of minority students are not taking college entrance examinations, and that this factor contributes to the test score declines is unfounded.

Dropouts. The dropout rate decreased sharply from 1950 to 1968 (from 50% to 25%). Since then it has been stable. This, in fact, does mean a change in some test-taking groups, as more pupils in grades six through twelve, who in earlier years would have dropped out and who were typically low achievers, now take tests. However, this change in composition of test takers cannot explain the relatively large achievement test score declines in the seventies.

Early graduation. Early graduation has increased nationwide from 2.2 percent (1971/72) to 7.7 percent (1973/74). The argument has been raised that early graduates are mostly high achievers, thus lowering 12th grade scores. However, the data indicate that early graduating pupils represent most of the spectrum of high school pupils except the lowest ranges of achievement. Therefore, the large achievement test score declines for 12th graders cannot be explained by a cream-off effect of early graduates.

To summarize, we have concluded that changes in the tests and the ways they are scored, and changes in the composition of the groups taking the tests, cannot account more than slightly for the declines that have been observed. We will have to look elsewhere if we are to find explanations. The search for causes has to extend to society and school.

3. The Search for Causes: School and Society

3.1 Society

The effect of societal changes are extremely difficult to trace and most factors have little political potency. We therefore, restrict ourselves to mentioning some factors that might have impact on the score declines, but we are not in the position to assess their influences.

Drugs. The National Institute on Drug Abuse (NIDA) reports that 8- to 14-year olds constitute the fastest growing group of drug users. It has been estimated that 20 percent of pupils older than 11 years have tried marijuana and that about 6 percent of high school seniors smoke it and/or drink alcohol daily.[2]

Television. Television is often assigned a core function in altering pupil experiences over the past twenty-five years. The main arguments are that it decreases the time that was otherwise devoted to homework and reading and that it impoverishes family interaction. We did not discover or retrieve any data enlightening this issue. The only evidence we found indicates that, in fact, set ownership and the average amount of time that television sets are operating has continually increased since 1950, including the period of the test score decline.[3] But to be of any evidential significance, we would need to know what and how long children of various ages view television. Is it likely 1) that the general visual and verbal stimulation of television and the existence of educative pre-school programs are responsible for the achievement increases in lower grades, and 2) that older children's

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2. Holden, C. Drug Abuse 1975: The "War" Is Past, the Problem is as Big as Ever. Science, 190, 1975, 638-641.

3. Bower, R. T. Television and the Public. New York: Holt, Rinehard, and Winston, 1973.

television viewing has a contrary effect -- keeping them from educationally important activities, such as reading or consultative interaction with adults? No data are available.

Family. Clearly, the American family has undergone dramatic changes over the past twenty-five years: Labor force participation of married women with school-aged children has increased from 26 to 51 percent; single parent families have increased from about 10 to almost 17 percent of all families; and illegitimate children have tripled.

Baby-Boom Generation. But there are still other family- and generation-specific factors that might relate to achievement declines. The pupil population of the last decade, now in secondary schools, is the baby-boom generation. This pupil generation did not only crowd schools, but had an unusual family environment. Their parents typically married and had children at a considerably earlier age than parents in the periods before or thereafter. This implies, since income increases with age, that those children were, on the average, born into economically poorer environments. A hypothesis we have not yet been able to confirm concerns the likely higher proportion of children born, during that time, in lower as compared to middle classes. Both historic occurences might contribute to present test score declines.

Childspacing. But there is another unique feature to the present pupil generation, relevant to achievement: childspacing. During the high birthrate period, children were born relatively closer to each other in time. Research indicates that in general, close spacing seems to have negative effects on achievement.[4] Reasons proposed to explain this finding circle around the decreased amount of individual parental attention or interaction that children receive when siblings are close in age.

However, as we lack direct evidence of the relation of these societal changes to achievement test score changes, we have to remain very speculative about those potential causes of test score declines located in the society and more intimately in the family.

3.2 School

Much of the blame for achievement score declines has been attached to the schools. Have there been changes in the schools that could account for the declines in test scores?

3.2.1 Pupils and Teachers

Absence. Over the period of decline, absences have increased. These absences could have decreased children's exposure to schooling or they could signal greater difficulties for teaching, which might account for part of the decline.

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[4] Breland, H.M. Birth Order, Family Configuration and Verbal Achievement. Child Development, 1974, 45, 1011-1019.

Zajonc, R. B. Family Configuration and Intelligence. Science, 1976, 191, 227-236.

Achievement Motivation. Absence rates may indicate motivational changes, which have also been proposed as explanations for declining test scores. The economic value of schooling has in fact declined: The recent recession has made it more difficult to obtain jobs and has decreased the monetary return of additional years of schooling. If pupils or their parents believe that there is no great economic benefit of college or university attendance, then are they less motivated to achieve well in secondary school? Also, have more fundamental value changes occurred in this generation of pupils? We cannot ignore this explanation, even though we do not have any consistent and solid evidence.

Desegregation and Mobility. Some have suggested that the increases in busing and desegregation result in school turmoil which, in turn, decreases achievement. Others have indicated that the American population has been increasingly mobile and that moving from school to school may lower achievement. However, under close scrutiny, these two explanations seem unlikely. Regional and state differences in degrees of pupil mobility and in levels of desegregation do not parallel decreases in achievement. In fact, the smallest declines in test scores seem to have occurred in the southeastern part of the United States, precisely the area with the greatest amount of desegregation.

Teachers. Are teachers less skillful? Some observers have advanced this as a fact, but there is no evidence for changes in teacher characteristics and skills that could unambiguously account for declines in achievements of pupils. Although the average levels of teaching experience continually diminished until recently, the average numbers of years of college training increased.

If these school changes do not seem potent enough to account for the dramatic test score declines that have occurred, are there any schooling factors that could account for it?

3.2.2 Exposure to the Curriculum

One characteristic of schooling has changed dramatically over the period of the decline, and could constitute a powerful explanation of the declines. This is the secondary school curriculum. Namely, changes in the exposure of secondary school pupils to parts of that curriculum.

Solid data are available for a short but important period of the decline: the early 1970's. These were collected in National Center for Education Statistics surveys, concerning curricular offerings and course enrollments in American secondary schools. Integrating summary information from two surveys (1970/71 and 1972/73) we found that a number of important changes had occurred over a short period.[5]

English. For regular, yearly courses in English, e.g., "Tenth Grade English", the proportion of pupils enrolled declined by 15 percent. In looking to other elective and specialty courses for compensation, we find that these did not increase nearly enough to offset the decrease. All in all, there was an 8 percent drop in total English course-taking by American secondary school pupils in the early 1970's.

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[5] Harnischfeger and Wiley, op. cit.

Foreign Languages. For foreign languages, we find similar declines. French dropped 14 percent, German 13 percent, Latin 13 percent; Spanish increased, but only by 2.6 percent, and other, less common language enrollments decreased in total by 25 percent. To summarize by length of study, 1st year language enrollments decreased by 9 percent, 2nd year by 7½ percent, and more advanced enrollments decreased by 3 percent.

History. There is no total decline in history enrollments but a substantial rearrangement. Overall, traditional course-taking in history declined about 6 percent. More specifically for the three courses in this category, U.S. History declined 7 percent, state history 14½ percent and world history did not decline at all. This total drop in traditional history courses is offset by an enrollment increase in elective and specialty courses of 33 percent. As original levels of elective enrollments were quite small, the increases balance the drops, but make for a substantial rearrangement in history course taking.

Mathematics. Mathematics enrollments also had a total decline over this period amounting to about 7 percent. Again the pattern is important because there was also reorganization in the courses taken. Remedial enrollments, always proportionately small, remained so absolutely, but in relative terms increased by 80 percent (1.4 to 2.6). General mathematics enrollments decreased by 15 percent. College preparatory enrollments did not change overall but, interestingly enough, there was also a redistribution: enrollments in beginning and intermediate algebra and plane geometry decreased while those in very advanced and specialty courses increased.

Natural Science. There are large declines in science enrollments as well. Total general science course taking in secondary school declined by 13 percent and, within the highest, senior high school grades, even more so, amounting to 30 percent. College preparatory science has also declined: biology by 1 percent, chemistry, 10 percent, and physics, 30 percent, the decline magnitude depending on the mathematical preparation required. The only increases, 61 percent, derived from specialty courses in biological science, e.g., ecology.

To summarize: There has been a general and sizable drop in academic course-taking. There have been large drops in general or required courses and small increases in elective or specialty courses. There has been a remarkable drop in basic college preparatory courses - first and second-year foreign language, algebra and geometry, chemistry and physics. There has also been an ~~extreme~~ drop (30%) in practical course taking: homemaking and vocational courses.

Clearly, secondary pupils actually are taking fewer courses. Perhaps there has been a substitution of other activities which do not count as courses but do count for graduation credit. If, for example, work-study programs have increased because of heavy emphasis on career education, this could account for such decreases in academic course-taking. These activities would not be accounted as courses in enrollment surveys such as those conducted by the National Center for Education Statistics.

4. Inferences and Action

4.1 The Conclusions

There is no sole and solitary cause for declining achievement test scores and the assessment of causes is hampered by complex interrelations between societal and school factors. As societal factors seem more distal to the achievement decline, we focus on the school, especially on curricular issues.

The most important conclusions to be drawn from the currently available evidence about achievement declines are:

1) They are real and they cut across all tested areas,
2) They only appear in the fifth and higher grades,
3) They are restricted to the content taught in these higher grades, i.e., to achievements more complex than the simpler skills taught in the lower grades, and

4) They are likely strongly influenced by two curricular trends:

   -- a decline in the total amount of instruction received by secondary school pupils, and

   -- an increase in the diversity of pupils' educational experiences, producing reductions in the achievements measured by the tests and (likely) increases in those achievements which are currently unmeasured.

4.2 Some Critical, But Unanswered Questions

We reported lowered test scores in diverse areas: English, writing, literature, vocabulary, reading, social studies, mathematics, and natural sciences. These are traditional academic learning areas. What are the selected accomplishments in these areas that are assessed by standardized tests. And which ones are not assessed? What are the current deficiencies in achievement? Are they losses in knowledge, concept formation, abstraction, analytic skills...? Only thoughtful content analyses of tests can answer this important question.

The content of tests is an extremely important issue. Not only do tests inform us, perhaps poorly, about the success of our educational system in meeting our aspirations for the nation's children, also their scores are currently the most important criteria for educational advancement and sorting. Thus, those who construct educational tests control the precipitation of our vaguely felt and incompletely specified visions of the nation's future into the specific and concrete decisions about individuals, which determine the future roles they will play in our society.

Therefore, if we are to seriously evaluate the state of our educational system, we also need to ask whether pupils have gained in areas not assessed with typical standardized tests: Have they improved in effectiveness of public debate and speech? Have they gained in human understanding or understanding of aesthetic issues (art, music). Are we misled by declining scores in tests which incompletely measure the full ranges of skills in the areas they purport to assess? And are there increases in content areas which we value, but which are currently unmeasured? And how are these achievements distributed among children from families with different economic and social advantages.

The trend in secondary education towards "special" and more expressive courses indicates that the traditional common academic base may not be readily accepted anymore, either by teachers or by pupils, as course offerings and enrollments hint. Maybe parts of traditional course contents are obsolete, and perhaps instead of attempting innovation of traditional curricula, which is a cumbersome and expensive process, the practical education community has been helping itself with new "special" courses, whose contents might be highly distinctive from school to school and not attended to by test developers.

Definitely, curricular changes are highly likely to be responsible for part of the test score decline. But we also need to clarify what lower academic course enrollments mean. Other systematic changes including declines in vocational and music enrollments and increases in artistic ones make the general pattern difficult to understand. Are these decreases indicators for shortened school days, or increased study halls which substitute for homework? If not, to what extent are these courses replaced -- beyond the small increases in special offerings -- by aesthetic or expressive activities, or vocational pursuits not categorized as courses, such as work study programs or increases in part-time jobs? And how has this modified traditional differences between the educational experiences of pupils bound for higher education and those who are preparing for more direct entry to the labor force?

4.3 What Should Be Done?

The reported declines are real. Course requirements have been lowered. Schooling has been cut.

If we believe that most of the next generation can function and progress with less basic knowledge in science, then no worries in that area are justified.

If we believe that less mathematics is necessary for the vast majority of pupils, then we do not need to worry.

If we believe that verbal skills, such as those measured by the more advanced tests, are less necessary in the future, then our schools are on the right track.

I, personally, do not believe this. Verbal skills are basic to concept formation, to our understanding each other and the world. For good reason, they are considered the most important skill area that school must develop. Our society, presently, and surely in the next generation requires before all verbal skills.

However, I am not sure whether the standard tests that strongly focus on the interpretation of literary passages strike at the center of important verbal skills. The increased diversification in English courses indicates a content shift (newspaper analysis, dialect analysis, analysis of the language and jargon of professional groups) which I greatly value. Standard English and American novels and short stories are, in my view, less part of the present and future life than news, professional jargon, and inter-group communication.

There is one additional and extremely important point relating to the decline in verbal skills.While total course offerings and enrollments in English are decreasing, they are doing so for just about every type of student. This is so, because English as a subject area has never had very extensive differentiation of pupils and courses, such as that in mathematics and natural science, where basic and highly advanced courses are differentially offered. This lack of differentiation has likely contributed to the generality of the verbal decline.

Natural science and mathematics have also experienced declines in test scores and declines in course enrollments.However, enrollment declines have not occurred for the advanced courses. And we accordingly could not detect any substantial score drops for the high achievers in these areas. But our society needs many members with basic understandings of scientific issues, if we are to consciously mold our environment and make reasoned and thoughtful decisions about the future. We cannot allow society to be solely run by experts or technocrats. Basic instruction in science is mandatory for every student.

With respect to mathematics, the issue is more complex. Minicomputers and calculators have drastically changed our computational world. It would be wasting resources to place heavy emphasis on computational skills, Instead, mathematics should be taught as a subject area, enforcing logical and relational skills and concept formation. Some of the socalled "new math" does just that. But these skills should be stressed,and that is currently the case in only a few school systems.

These are my opinions. Presently, the dominant trend reacting to the achievement test score decline is the "back-to-basics" movement. And this movement clearly implies curricular change. Sales of instructional equipment are dropping, , while those of textbooks with more tradtional content emphases are rising.

This movement counters one important characteristic of recent curricular trends: The increase in the diversity of offered and accepted experiences, at least in secondary school. This trend has exhibited itself in 1) the increasing local diversity of curricula, 2) the augmented numbers of courses appealing to special groups, and 3) the greater numbers of elective as opposed to "core" courses.

It is, of course, much easier to representatively assess the state of intended learnings when the curricula have a large common core of "basics" than when they have little commonality. If we have moved from an era when tests were developed against the background of strong consensus on goals, and consequent great similarity in the curricula widely offered, to an era of disagreement over goals and curricular diversity, but little change in test coverage, then achievement declines on standardized tests would naturally follow. In fact, it is hard to see, under these conditions, how scores could not drop.

Problematically, the back-to-basics movement seems to neglect the untested content, in only focussing on skills that are commonly represented in most tests. Has the movement's re-emphasis on educational fundamentals been simplistically derived from test score declines, together with other dissatisfactions, such as increased societal permissiveness, or has it resulted from a thorough reconsideration of educational goals and the curriculum? For a thoughtful and engaged educator, it is, at this time, difficult to endorse the movement. What we need and what the achievement score trends should provoke, is a reconsideration and debate over educational goals.

We need to valuate losses and possible gains in pupils' knowledge and skills responsibly against a thoughtful vision of our, but mainly our pupils' future. The recent test score declines should initiate a reconsideration of basic and advanced skills, skills necessary for a rounded life, consumption, employment, leisure, and political action.

We surely have to carefully consider curricular changes, such as the ones in English and mathematics. We definitely have to construct tests that reflect both our goals and the actual instruction given. I do not believe that we currently have these kinds of tests for advanced verbal skills and thus, we definitely should not be automatically frightened by the results of partially inadequate test instruments and quickly stampeded "back to bascis." The importance of achievement test score declines cannot be meaningfully assessed and thoughtful action cannot be initiated without a thorough consideration of these issues and questions.

STATEMENT OF DR. DAVID E. WILEY, CO-DIRECTOR, ML-GROUP FOR POLICY STUDIES IN EDUCATION CEMREL, INC.

Dr. WILEY. Let me first thank you for the opportunity to appear before the committee, especially on this extremely important matter of educational achievement.

I am David Wiley and I am Co-Director of the ML-GROUP for Policy Studies and Education of CEMREL, Inc. and I am also an associate professor of education in behavioral sciences at the University of Chicago, currently on leave.

CEMREL is a regional educational laboratory that is primarily supported through the National Institute of Education and it is headquartered in St. Louis. Our group is devoted primarily to research activities and we are located in Chicago.

The background for my testimony today is a study that we performed with the Ford Foundation support late in 1975. We were asked to put together an interpretive summary of facts and information concerning national test score changes and that summary resulted in a report which came out in December, 1975.

We have, since that time, reflected on some new information about the phenomenon of achievement decline and I think we have some sharpened interpretations of those phenomena and some fairly definite views about them. I would like to talk about that today.

These issues of achievement decline—and there have been achievement declines since about the mid-sixties—have given rise to great concern about our educational system. This in a period when expenditues have been rising very rapidly, people have been concerned about whether the money has been misspent and about whether or not the test scores really indicate a disintegration of the educational system.

We really need answers to these questions and we hope in some of our work to contribute to that debate productively.

Just to summarize fairly briefly what we did, we looked at almost all of the nationally available test data on ten different test batteries that relate to the changes that have occurred in achievement levels over the last ten years. This has involved looking at more than forty individual tests and performance data deriving from those tests.

Let me just briefly summarize the pattern of result. You referred to Mrs. Golladay's testimony yesterday. It is true that there have been declines, there have been increases and there have been no changes in some tests, but that does not mean that there is not a pattern to those results and it doesn't mean that the pattern is not a source of some concern.

Basically there have been declines in all achievement areas from Grades 5 through 12. That is, in the upper parts of elementary and secondary education.

There is no evidence of any decline in the lower levels. That is grades 1, 2, 3 and 4. In fact, we have some evidence of slight increases in the kinds of skills that are measured at those grade levels and the kind of skills that are taught at those low grade levels so it is not, as Mrs. Golladay said, an unmixed pattern, but the pattern is a pattern and it does have some cohesiveness and it does have some interpretability.

One of the basic things about the pattern is that it is not just a pattern of ages. It is also a pattern of content and it, therefore, relates directly to the kinds of things that are taught to children at various ages. The kinds of things that are measured on tests at the lowest grade levels are very fundamental charactristics of the kinds of things that children learn in school. The reading skills are basic, basic decoding skills, basic skills which relate to the ability to read aloud, to comprehend very simple kinds of contents.

In the higher grades we are talking about more interpretive and more critical skills and skills that relate to the interpretation of longer passages of textual material, particularly in reading. The important point to remember is that the content that is very simple is the content on which children are learning as much or more than they were learning some years ago and that the content, which is more complex, is the content on which the skills levels are declining.

I will come back to that a little bit later.

In the course of our review of the evidence about test score decline, we look very carefully at the tests themselves and at the children who were taking the tests. In looking at the tests, there have been some changes in the tests themselves over the last ten years, but those changes are not very large. As a consequence, we cannot attribute the declines to changes in the tests and the contents that they measure.

We have also looked fairly carefully at those children who are taking the tests and the question, especially for college entrance examinations arises: Has the composition of the groups of children who are taking tests changed in such a way that that could account for the decline? We have looked at the racial background of thoes kids, the socioeconomic status of those children, and neither of those factors can account for the kinds of declines that have occurred in college entrance examinations.

In other areas, lower areas of testing, issues of dropout and early graduation hvae been raised as possible factors which influence the score decline and I think we can rule those factors out as being substantial components of the decline. The decline is real and the decline is substantial for children in higher grade levels and it relates to the content that is measured on the tests that are used for assesment.

In turning to look for likely causes of the decline, we first looked into the society as a whole to try to get a summary of the kinds of information that were available about commonly suggested influences on score decline. Factors such as drugs, television, changes in the American family, the peculiar child-rearing circumstances of the baby boom generation, and specifically the spacing of children in those families.

I won't bother you right now with the details of those societal changes, but will say that we haven't spent so much time on them because they don't seem to us to have any great political potency.

It is probably true that major changes have occurred in the American society and those may have indirectly contributed to test score decline, but in our view it is likely that the arena in which they have played out their influences is the school.

I would like to just turn to the school for a moment to look at the kinds of changes that have occurred in the schools and how they are likely to relate to changes in tested performance.

Let me pass over several issues that have been proposed as changes that take place in the school that might be responsible. One is absence rate and absences have in fact increased.

Another is achievement motivation, and some people feel that even the absence—the increases in absence rates signal more general declines in the motivation for achievement in American youth.

We have also looked at issues of segregation and mobility because some people have proposed there have been disruptive elements in the school because of these phenomena. We have looked at changes in the characteristics of the teaching forces which others have proposed as one of the major causes of test score decline.

In general we do not feel any of thoes changes are sufficient to account for the dramatic declines that have occurred.

The area that we feel is a key area to look at and which is probably the area that has produced most of the major contributors to the decline is in terms of curriculum and the change in the curriculum that has occurred over the last decade or so.

We were fortunate to be able to review some of these changes because the National Center for Education Statistics has collected data that are relevant to some parts of curricular change in secondary schools.

We have looked at changes in several areas. In English instruction, foreign languge, history, mathematics and science. Those are summarized in the testimony.

Let me just summarize the general conclusions.

Even though there is no single and solitary cause for declining achievement scores, we feel that the following—let me give the following summary facts that are important.

One is, the declines are real and cut across all tested areas.

They appear only in the fifth and higher grade levels.

They are restricted to the content that is taught in these higher grades—that is, to achievement of more complex rather than the simpler skills taught in the lower grades.

They are strongly influenced by three curricular trends. One is a decline in the total amount of instruction received by secondary school pupils. All the evidence we have been able to accumulate indicates that the total amount of secondary school instruction has diminished over the last decade. We don't know precisely why it has diminished, and one can speculate, but the total number of courses a typical child takes in secondary school is smaller now than it was.

Secondly, the kinds of courses that are available and are required of children have diversified. Course requirements have gone down and course offerings hvae increased in a variety so that children are receiving much less common educational experiences in seondary schools today than they were in past years. That is likely to be also a source of achievement score decline.

These are two major curricular trends: A drop in total instruction—one trend—and a diversification of the instruction that is offered, a second trend. In addition, within specific cources the content that is offered today is different than the content offered ten years ago. We don't have the kind of specific information we would like about the changes in the course contents of specific kinds of courses, but in general we can say that the course content has changed and we can say a little bit about the directions in which those course have changed.

I would say one of the problems with respect to evaluating the significance of the score decline is that the tests in general have not changed nearly as much as the experiences of the children. That is, the content of the tests is still, in general, about the same as it was ten years ago. One exception to that is the national assessment. The national assessment instruments are more diverse and do pick up a wider variety of curricular content than the traditional standardized tests, but that is one of the few exceptions that we have in this field of testing. The tests have not changed and, as a consequence, since the instruction has drifted away from the tests, that is clearly one part of the decline. It would seem that in general there are three causes for the decline that are located in the school. One is that children are taking fewer courses and the less exposure they get means that they learn less and therefore their achievement will go down.

Secondly, they are taking different courses than those that are measured on the tests and consequently even when they learn more that is not reflected in achievement gains; it is reflected in achievement losses because when they learn more in one area they have less time to learn in the area that the tests measure.

Third, the content of the courses traditionally measured on the tests has changed over the years and in general the test content has not caught up with it and, as a consequence, the performance on the tests that reflected instruction some years ago is not going to increase.

I think we in general feel that two of these trends are probably not beneficial to American education, but the third trend is. I think that makes a simplistic return to "back to basics" a problem.

I think we do need to go back to revitalize the curriculum and to change the way in which its exposure to pupils, or pupils' exposure to it, but we must be very careful not to make changes which will ill-adapt children to the future society.

Let me just summarize under the heading of what should be done.

If we believe that the next generation can function with less basic knowledge of science, then we don't have any worries in that area. If we believe that less mathematics is necessary for the vast majority of pupils, then we need not worry about that. If we believe that less mathematics is necessary for the vast majority of pupils, then we need not worry about that. If we believe verbal skills such as those measured on the more advanced tests are less necessary to the future then our schools are on the right track.

I personally do not believe this. Verbal skills are basic to concept formation and they are basic to our understanding of each other and to society and we surely require that the next generation require before all appropriate verbal reading and writing skills.

However, I am not sure that standard tests which measure these characters strike at the center of important verbal skills.

The increased diverification in English courses has indicated a content shift. There is more newspaper analysis, dialect analysis, analysis of langugae and jargon of professional groups which we all need if we are going to function in the society, and which I greatly value. I think the tests tend to concentrate more on the interpretation—this is not generally so, but they tend to focus more on the interpretation of literary passages and not on the newer content of English construction so important to our future society.

I would say the National Assessment is to some degree an exception in its test content.

One other very important point about declines in verbal skills, these declines are general. That is, they occur at all levels of achievement and that is probably true because the instruction in verbal areas has never had the extensive differentiation in tracking or sorting that instruction in national sciences and mathematics has had.

Traditionally there were not as many specialized and very advanced courses offered in the verbal areas as there was in mathematics and natural science. This produces a different pattern of decline in verbal scores. Verbal ability seems to have diminished across the whole range of the score distribution. That is not generally true in natual science and mathematics. The very top levels of achievement in natural science and mathematics have not declined. Correspondingly, the enrollment in advanced courses in mathematics and natural science in secondary schools have also not declined. So there is a parallel pattern. The general achievement in mathematics and the general achievement in natural science has declined, but not the very top levels.

I think that is a very important interpretive change in looking at secondary schools.

We definitely believe that in order to have a future society which is beneficial to all, that children do need basic skills in science so we need to look at science as well as verbal areas.

In mathematics, things are also more complex and we believe there needs to be some changes in mathematics instruction, but we don't believe that there ought to be a heavy shift back to computation. Advances in minicomputers and calculators have changed the computation context of American society and mathematics instruction we believe need to be changed, but ought to focus more directly on conceptual issues rather than computation.

One of the problems that we have with at last the simpler versions of the back-to-basic movement is that there seems to be a heavy emphasis focusing on the skills that are measured on the tests and we really need to reconsider the test content and to see how it matches the goals that we have for our children. We definitely do need changes in our schools, but we definitely do not want to go back to the instruction of 20 years ago because the needs of our pupils have changed. What we need and what achievement score trends should provoke is a reconsideration and debate over educational goals and I hope that I can contribute to that debate.

Thank you.

Mr. MOTTL. Thank you, Dr. Wiley, for your outstanding testimony.

Next we will hear from Dr. Roy Forbes, Director of the National Assessment of Educational Progress.

[The prepared statement of Dr. Forbes follows:]

STATEMENT

before the

House Subcommittee on Elementary, Secondary,
and Vocational Education

on

May 11, 1977

by

Roy H. Forbes

Director, National Assessment of Educational Progress

My name is Roy H. Forbes. I am the director of the National Assessment of Educational Progress, a project administered by the Education Commission of the States. National Assessment is a project of the National Center for Education Statistics.

The major purposes of National Assessment are: 1) to obtain census-like data on the knowledge, skills and attitudes of elementary and secondary students and young adults 26-35; and 2) to measure the growth or decline in educational attainment that takes place over time in key learning areas. These learning areas are reading, writing, mathematics, science, social studies, citizenship, art, music, literature, and career and occupational development.

National Assessment has completed and reported the initial assessment results for all ten of these areas. Several areas—reading, writing, science, social studies and citizenship--have been assessed twice. Results reporting progress and declines have been issued for reading, writing and science. The citizenship and social studies data are currently being analyzed and a report will be released late this year. Science is currently being assessed for the third time. Math will be assessed for the second time during the next school year. Also, a special assessment for The Right to Read Effort on functional literacy has been completed and reported.

Recently, National Assessment staff prepared a summary of previously reported data that developed a profile describing what many students know and can do, what some students know and can do and what few students know and can do. "Many", in this case, is defined as more than two-thirds while "few" is defined as less than one-third.

Some of the results were:

Many 9-year-olds:

- can add two-digit numbers
- can tell time
- can read and comprehend literal facts in simple, brief stories
- read books and stories on their own, and
- are familiar with the uses of dictionairies and encyclopedias

Some 9-year-olds:

- can subtract two-digit numbers
- can do single-digit multiplication word problems
- can compose essays when given explicit instructions, and
- can understand that the federal, state and local governments have different functions

But, few 9-year-olds:

- are able to do division
- are familiar with the contributions of minority people to society
- can determine the main idea in a reading passage, or
- can organize and elaborate ideas in writing

A quick review of the 13-year-olds show that many:

- can add, subtract, multiply and divide whole numbers
- know the functions of the major parts of the human body
- are familiar with the duties, skills and salaries related to a variety of occupations
- can read and comprehend short, straight forward materials, and
- can write a cluster of two or three related ideas

However, few 13-year-olds:

- can choose the most economical buy at a supermarket
- can infer meaning from sophisticated passages, or
- can organize and elaborate ideas in writing

A snapshot of the 17-year-olds show that many:

- can add, subtract, multiply and divide whole numbers and decimals
- can multiply fractions
- can solve simple word problems requiring multiplication
- have mastered the mechanics of writing, and
- can read and understand directions and instructions

But, few 17-year-olds:

- can calculate the area of a square given its perimeter
- understand probability
- write excellent essays, or
- have discussed aptitude tests results with anyone who could advise them about career plans

The above is a quick review of what students know and can do. Looking briefly at the three areas that have been assessed twice, change data indicate that in science, knowledge is declining at all ages; the only improvement was the performance of black 9-year-olds in the Southeast. In reading, the performance of 13- and 17-year-olds changed little over the last four years. However, 9-year-olds are reading better. Black 9-year-olds have made a dramatic improvement in reading performance. In writing, again, the 9-year-olds showed improvement, but National Assessment found that students age 13 and 17 used a simpler vocabulary, wrote in a shorter, "primer-like" style and had more incoherent paragraphs than their counterparts in school four years earlier.

What does this mean in relation to the "back-to-the-basics" cry?

The data suggest that the most basic of the basics--simple computation, literal comprehension and writing mechanics--are being performed by many students. But the application of these skills to basic group and individual problem-solving is not a skill demonstrated by many students. Data collected since 1969 suggest that this has historically been the case; therefore, it is not a matter of returning to the basics but to proceed with the improvement of the instructional process to provide more students with basic problem-solving skills.

However, this does not mean the National Assessment data suggest that "all is well"; to the contrary, the data also suggest that we do have problems.

National Assessment conducted a special study for the Right to Read program. Using a "functional literacy" standard suggested by The Right to Read Effort, approximately 13% of the 17-year-olds in school are functionally illiterate. At least 1 out of 10 of those students nearing the end of high school is still not able to do basic, everyday reading tasks. It is important to note that this ratio changes with the type of community in which the student lives. In some high socioeconomic sectors the ratio is as low as 1 out of 20 who is functionally illiterate; in certain low socioeconomic sectors the ratio exceeds 1 out of 5.

All National Assessment learning area results have demonstrated this gap in achievement between the "have's" and the "have nots". In the case of reading, at the 9-year-old level, the gap appears to be closing. Can the gap be completely closed? Data are not available to answer this question, but data are available to demonstrate that the gap can be lessened.

The need for additional emphasis on the basics does not apply in the same degree to all segments of our student population. The special needs of students from low-income areas and students whose parents did not achieve a high school education are well documented by the National Assessment. Apparently the nation's efforts to provide equal educational opportunities has not yet resulted in equal educational benefits for all of our country's students.

Thank you, Mr. Chairman. I will be pleased to respond to any questions pertaining to either the data presented or the methods used to obtain the data.

READING

National Assessment has found that, nationwide, an estimated 50,000 more 9-year-olds were able to respond correctly to a typical reading item in 1975 than in 1971.

Moreover, National Assessment found that the average percentage of black 9-year-olds answering reading items correctly increased 4.8 percentage points, while the average reading performance of white 9-year-olds increased by 1.2 percentage points. However, even with the greater increase in reading skills, black children are still 13 percentage points below their white counterparts in overall reading levels.

In the Southeast, the gap between black and white 9-year-olds' performance narrowed, with blacks gaining 7.7 percentage points from 1971 to 1975. The difference in achievement between whites in the Southeast and whites in the rest of the nation stayed much the same.

For the two teenage groups assessed, 13- and 17-year-olds performed at about the same levels in both 1971 and 1975. Some exceptions in 1975:

- The gap between teenage Southeastern blacks and whites narrowed.
- In the rest of the nation, reading skills of 13- and 17-year-old blacks declined.
- Whites in the Southeast improved slightly; achievements of whites in the rest of the country remained about the same.
- More 17-year-olds in 1975 were able to read basic, everyday items such as a telephone bill or instructions on a can of pet food.

Other results:

- While students in the Southeast are still performing below the national level, the Southeast 9-year-olds show significant gains in reading skills.
- As a group, girls continue to read better than boys at all age levels.

National Assessment studied the achievements of more than 63,000 students -- ages 9, 13 and 17 -- in each of two reading assessments.

Nationwide, 17-year-old students have improved in the basic reading skills needed to function in today's world. However -- among these same 17-year-olds -- over 21% of the students from the disadvantaged urban areas of our country, nearly 42% of the students who are black and 20% of the students from the Southeast are still functionally illiterate.

(continued)

READING *(continued)*

The National Assessment survey, made for the Right to Read program of the U.S. Office of Education, compared the functional reading performance of 17-year-old students in 1971, 1974 and 1975. From 1971 to 1975 there was:

- An average gain of more than 2 percentage points on such basic reading items as street signs, store coupons and telephone directories.
- A gain of almost 5 percentage points by black students; white students gained 2 percentage points over the same period.
- A gain by students living in low-income urban areas of nearly 5 percentage points, while those from the affluent urban areas showed no gain.
- A gain by students in the Southeast of over 3 percentage points, while students from the Northeast showed no gain. Students in the West gained almost 3 percentage points; those from the Central part of the country gained about 2 percentage points.

Being functionally literate is defined by Right to Read as "being able to perform tasks necessary to function in American society, such as reading newspapers, instructions and even drivers' license tests." The National Assessment study included only those types of reading material considered to be at the functional literacy level. Over 4,200 students across the country were surveyed in each assessment.

The Right to Read program determined that 17-year-old students should be able to answer at least 75% of the questions in the assessment correctly (give correct answers to 64 out of the 86 questions). Any student passing this criterion could reasonably be considered functionally literate.

Using this as a guide, about 87% of the 17-year-old students are functionally literate. Among the four geographic regions of the nation, the percentage of literacy ranges from almost 91% in the Central region to 80% in the Southeast. Among white 17-year-old students, almost 92% reached the Right to Read criterion, contrasted with a little more than 58% of the blacks. Ninety-five percent of the urban-fringe students achieved the functional literacy criterion, while only slightly more than 78% of those from the disadvantaged urban areas did so.

First reading assessment: 1971
Second reading assessment: 1975
Third reading assessment: scheduled 1980
First functional literacy assessment: 1974
Second functional literacy assessment: 1975
Third functional literacy assessment: pending

WRITING

In a survey of writing skills taken first in 1970 and repeated in 1974, National Assessment found that, in 1974, students aged 13 and 17 used a simpler vocabulary, wrote in a shorter, "primer-like" style and had more incoherent paragraphs than their counter-parts in school four years earlier. Only the 9-year-olds' papers showed an improvement, with the proportion of good writers rising in 1974.

The writing assessment, which involved 80,000 students, included essay-type questions of three age levels -- 9- and 13-year-olds and 17-year-olds who were still in school. The writing of 17-year-olds, nearing high school graduation, declined in quality between the two assessments. The 1974 students showed an increase in awkwardness and run-on sentences and a tendency to write as they would speak.

Writing performance for 13-year-olds also declined. On the average, the 1974 essays were shorter, less sophisticated in expression and more awkwardly written than the 1970 essays

Researchers were optimistic with the new data that showed 9-year-olds improving slightly over the four-year span. And there was a feeling that the mechanics of writing -- punctuation, capitalization, verb agreement, spelling -- "seem to be well in hand."

What did concern educators and the public was the decline in coherency in teenagers' writing. Speculation as to reasons for the decline frequently singled out society itself: the influence of TV and advertising language and its abbreviated, fragmented sentences, together with continuity sensed visually rather than through writing. Textbooks and teachers, some writing experts said, are not keeping up with the language of their students.

Another speculation was the fact that there just isn't the need to communicate through the written word: the telephone is quicker and easier than writing a letter.

The best way to reverse the decline, language experts generally agreed, lies in "teaching writing by making kids write" and "by having more skilled teachers of writing" to juggle the incongruities of what is in textbooks and what youths read in everyday life.

In 1974, females were still writing better essays than males at all three ages. In the 9-year-old group, the writing performance of both males and females improved. At the 13-year-old level, both males and females declined in writing abilities, with males declining further than females in performance. At age 17 the female decline was greater than that of the males, but "she" was still writing better than "he" in 1974.

First writing assessment: 1970
Second writing assessment: 1974
Third writing assessment: scheduled 1979

MATHEMATICS

National Assessment's mathematics survey, conducted during the 1972-73 school year, involved more than 90,000 students ages 9, 13 and 17 and young adults 26-35. The math items required skills ranging from basic computational ability to knowledge of trigonometry and practical "consumer" problems. *Results show that the majority of 17-year-olds and young adults have mastered the fundamentals of addition, subtraction, multiplication and division when presented as computational exercises. But when it comes to applying these basic skills in everyday situations, these same young Americans flounder:*

- Less than one-half of the 17-year-olds and adults could successfully determine the most economical size of a product.
- Only 10 percent of the 17-year-olds and 20 percent of the adults could correctly calculate a taxi fare.
- Only 1 percent of the 17-year-olds and 16 percent of the adults could balance a checkbook.
- 45 percent of the young adults could not read a federal income tax table correctly.

There is a difference between the sexes in consumer-mathematics skills. It is usually assumed that women do a major part of the buying, but males consistently outperform females on exercises involving buying and household situations. . .and females also show a drop in consumer math skills as they grow older.

The NAEP survey indicates that the nation's youthful consumer has difficulty with any form of mental arithmetic. All age levels score low on the ability to estimate or approximate whether an answer is reasonable -- a skill that is considered vital for consumer survival.

- Adults have greater trouble with multiplication problems than do 13- and 17-year-olds, and they also fall below 17-year-olds' performance in working with decimals.
- Whites perform 3 to 4 percentage points above the national level, while blacks are 14 to 21 points below.
- Young people from the lower-socioeconomic areas perform 10-16 percentage points below the national level; those from affluent areas are from 6-8 percentage points above.
- The Northeast is above the national level at all ages; the Southeast is about 6 percentage points below; the Central and West areas are split: at the school-age levels, individuals in Central regions are a point or two above the nation, while those in the West are slightly below. Adults in both regions perform above the national level.

First mathematics assessment: 1973
Second mathematics assessment: scheduled 1978

SCIENCE

Science knowledge in America's schools is declining.

National Assessment officials questioned 90,000 students, ages 9, 13 and 17, about biology, chemistry, physics and other science-related topics. Study results were collected during the 1969-70 and 1972-73 school years, then compared. Based on the estimated 3½ million school-age students represented by the groups tested, the results show that:

- Approximately 65,000 fewer 9-year-olds nationally could answer a typical science question correctly in 1973 than they could in 1970.
- Approximately 70,000 fewer 13-year-olds could respond acceptably to a typical science question in 1973 than in 1970.
- Approximately 80,000 fewer 17-year-olds could answer the survey questions correctly in 1973 than in 1970.

Other findings of the NAEP science assessment:

- At age 17, big-city students show the greatest decline, dropping from just above the national average to 2 percent below.
- Inner-city areas are well below the nation and are not improving.
- Suburban students at all three age levels perform above the national level, although their rate of performance is declining at the same rate as the nation's.
- Males and females decline at all three age levels in answering typical science questions. The performance of 9-year-old boys is 2-3 percent above that of girls, 13-year-old boys perform 4 percent above girls, and at age 17 the average male outperforms the average female by 6 percent.
- The percentage of rural students who could answer a typical science question increased at all three age levels, a trend that, if it continues, could bring rural students up to the national average by 1983.

In a study of regional trends in science achievement for students aged 9, 13, and 17, National Assessment found that between 1970 and 1973 declines in science achievement were smaller in the Southeast -- an area which was undergoing major desegregation -- than in the rest of the country.

During that period, science achievement in the South did not decline as much as it did in the rest of the nation. In fact, the science knowledge of black students in elementary school (age 9) actually improved.

(continued)

SCIENCE *(continued)*

The data also revealed that although Southeastern 13- and 17-year-old blacks' science skills had declined during those four years, the declines were less than were declines of black teenagers elsewhere in the nation.

Student performance in the northeastern, central and western areas of the country all declined between 1970 and 1973. Except at age 9, the western level of performance declined the most, about 3.5 percent.

How well are today's public schools -- and society, in general -- equipping tomorrow's voters to deal with the many environmental issues that are appearing on the ballot?

National Assessment has found that, on the average, one-third of the nation's 17-year-olds and young adults aged 26 to 35 could not answer simple cause-and-effect questions about the environment. Thirteen-year-olds did even more poorly: only half could answer a typical ecology question.

A major shift in science education has taken place over the past 20 years. New science curricula emphasize an "inquiry approach," utilizing scientific apparatus and laboratory techniques and procedures as learning devices.

National Assessment assessed the abilities of 9-, 13- and 17-year-old students to use the inquiry skills stressed in the "new" science. Some findings:

- There is a wide gap between the ability of students to demonstrate procedures and their ability to successfully explain these procedures. At all three age levels, the percentage of students able to do things is much greater than the percentage of students able to explain *how*, *why* or *what* they are doing.
- Blacks and females almost always demonstrate scientific abilities below the national median.

First science assessment 1970
Second science assessment 1973
Third science assessment 1977

CAREER DEVELOPMENT

According to results of National Assessment's 1974 survey of career and occupational development (COD), 44% of American 17-year-olds desire a professional career while census figures indicate that only 20-25% of currently existing jobs are professional or managerial.

The COD study involved some 100,000 individuals at age 9, 13, 17 and young adults, 26-35. The survey sought to determine the extent to which young Americans have the abilities to make wise and informed choices for entry into the labor force.

For the assessment, career development was defined as accurate self-evaluation, thoughtful career planning, realistic attitudes toward work, employment-seeking skills, effective work habits and those skills, such as computation and writing, that were judged to be basic for a wide variety of jobs.

National Assessment found that:

. One-third of the adults and more than half the 17-year-olds had difficulty writing a job application and figuring a finance charge.

. More than 80% of the 13- and 17-year-olds had had some paid experience.

. Less than half the 17-year-olds had taken an aptitude test and only 16% had discussed the results with a counselor.

. Those with the least education and lowest income were also the ones most lacking the skills necessary to improve their condition.

. Only 54% of the 17-year-olds could correctly answer five questions about the amount of training needed for a specific, commonplace job.

. Nearly three-fourths of the 17-year-olds and more than half the 13-year-olds could name two places to find information about jobs.

More than half of the adults said they had taken some kind of continuing education and those who had taken such courses generally performed better than those who did not. *Ironically, those who had not graduated from high school and who theoretically had the most to gain from adult education or on-the-job training, were the least likely to have had either.*

At all ages, males did better than females on computation-measurement questions and females showed greater ability on written communication skills. The male-female difference on computation-measurement was distinctly larger for adults than for the other three ages assessed.

National Assessment will survey career skills and attitudes again in 1980. Because career education was just beginning to appear in schools in the early 1970s, the 1974 assessment will serve as a benchmark against which the progress of career education can be measured.

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CITIZENSHIP BICENTENNIAL SURVEY

According to a special Bicentennial survey given to 13- and 17-year-olds, National Assessment found that *just over half of the nation's 17-year-old students know that each state has two U.S. senators and that the number of U.S. representatives from each state is determined by the state's population. Only about 50% of both the 13- and 17-year-olds know that the President cannot appoint people to Congress.*

. *Even in light of recent political history 14% of the 17-year-olds and 12% of the 13-year-olds think the President of the United States does not always have to obey the laws of the land.* In fact, the students place Army generals and the President on about the same level: 12% of the 17-year-olds and 13% of the 13-year-olds think that Army generals don't always have to obey the law.

. When asked whether Congress or the President has the right to stop radio, television or newspapers from criticizing government operations, over 80% of the 17-year-olds and over 70% of the 13-year-olds recognize that such an act is against the rights of a free press.

. 32% of the 17-year-old students do not think it is important to vote in all elections nor is it necessary to vote if it appears that the candidate of their choice isn't going to win.

. Half the 13-year-olds think it is against the law to start a new political party, and few of the students at either age know what steps Congress is empowered to take to stop a president from fighting a war without congressional approval.

When asked whether getting a job should depend on one's sex, race, political opinion, religion or abilities and skills, nearly all students agree that the determining factor should be one's abilities and skills. However, when asked: "If you saw several students fighting in the hallway, what would you do?" only 37% of the 17-year-olds say they would either look for someone in authority or try to stop the fight themselves.

The National Assessment findings are from a select portion of a major assessment in citizenship and social studies to be released in late-1977. The Bicentennial survey was given to 5,000 students during the 1976 spring school semester.

The lowest scores for each age group are in response to the question: "Suppose the President sends troops to another country to fight. What action can the Congress take to stop U.S. participation in the fighting?" The fact that Congress can exercise its power of the purse by refusing to provide money for further military action is known by only 16% of the 13-year-olds and 22% of the 17-year-olds.

First citizenship assessment: 1970
First social studies assessment: 1972
Second citizenship/social studies assessments (combined): 1976 (Results to be released late 1977.)

BY AGE GROUPS (continued)

Age 13

Thirteen-year-olds have the skills and knowledge necessary to accomplish routine tasks at home and at school. They have developed some study skills and know a variety of useful facts; however, the idea that they could use these skills and knowledge to make their daily lives more interesting and productive is not always obvious to them.

Many 13-year-olds:

- Can add, subtract, multiply and divide whole numbers.
- Can make change.
- Understand basic facts about the solar system and universe.
- Know the functions of the major parts of the body.
- Have had paying jobs.
- Understand the basic functions of the court system.
- Can use basic reference materials.

Some 13-year-olds:

- Understand and compute with fractions and work word problems.
- Can manipulate algebraic expressions.
- Understand basic nutrition.
- Understand specific facts about the earth.
- Can read and understand detailed instructions.

But few 13-year-olds:

- Can organize and elaborate on ideas in writing.
- Understand the structure and function of the legislative branch of government.
- Understand the basic principles of economics.
- Know very much about the atom.

Age 17

Seventeen-year-olds have some knowledge of the world of work, have thought about their futures and know what attitudes and behaviors are expected of them in our society. They know a number of facts about our government and legal system and know a number of specific scientific facts. They have difficulty reading long passages and have limited vocabularies in writing. They can read, write and compute in well-structured situations, but they have difficulty applying their knowledge to new situations. Indications are that 17-year-olds' knowledge levels have slipped slightly over the past seven years.

Many 17-year-olds:

- Can add, subtract, multiply and divide whole numbers and decimals.
- Can multiply fractions.
- Can solve simple word problems requiring multiplication.
- Understand some facts about nutrition, illness and disease.
- Understand materials such as newspaper ads and telephone bills.

Some 17-year-olds:

- Know about human reproduction.
- Can convert decimals to common fractions.
- Can organize and elaborate ideas in writing.
- Can make inferences after reading a long paragraph.
- Can add fractions.

But few 17-year-olds:

- Can calculate the area of a square given its perimeter.
- Can simplify algebraic expressions.
- Can convert Fahrenheit to Centigrade given the conversion formula.
- Know the functions of the legislative branch of government.
- Have discussed aptitude test results with counselors.
- Can write excellent unified and focused essays.

STATEMENT OF DR. ROY FORBES, DIRECTOR, NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS

Dr. **FORBES**. Thank you.

This is administered by the education systems of the states. However, it is a project of the National Center for Education Statistics and is federally funded.

The purpose of the assessment is two-fold. One is to obtain census-like information on the knowledge and skill and attitudes that elementary and secondary students have and on a group of young adults age 26 to 35.

The second goal is to be able to measure change. Has there been decline or progress in the knowledge skills and attitudes of those groups that we assess?

We assess in ten learning areas, reading, writing, mathematics, science, social studies, citizenship, arts, music, literature and career and occupation development.

Up to this time we have been able to assess in all ten of the learning areas and report data. We have also assessed twice reading, writing, science, social studies and citizenship and we have reported the change results in science, reading and in writing.

The social study citizenship change report will be released later this year. Next year we will be assessing mathematics for the second time and during the current school year we have been assessing science for the third time.

We also have completed a study for the "right to read" program in an effort to assess the levels of functional literacy of 17-year-olds in schools.

Recently we looked over all of the data that we have collected since 1969 and compiled a profile describing what many students know and can do, what some of those students know and can do and what a few know and can do.

In this case many is defined as two-thirds or more of the students and few is defined as one-third or less of the students.

Briefly some of the results: The nine-year-olds, we found that many can add two-digit numbers, tell time, they can read and comprehend literal facts in simple, brief stories; they read books and stories on their own time and they are familiar with some reference materials. Some of them can subtract two-digit numbers, can compose essays when given very explicit instruction, can understand that the federal, state and local governments have different functions.

Only a few are able to do division, are familiar with the contribution of minority people to society and can organize and elaborate ideas in writing.

A quick review of the 13-year-olds shows at that age many can subtract, multiply and divide whole numbers; they know the functions of the major parts of the human body; they can read and comprehend short, straightforward materials and they can write a cluster of two or three related ideas.

If we look at what a few can do, they can choose the most economical buy at a supermarket, can infer meaning from sophisticated passages or can organize and elaborate ideas in writing.

A quick snapshot of the 17-year-olds: Many, again, can add, subtract, multiply and divide whole numbers and decimals; they can multiply fractions successfully; they can solve word problems that require multiplication; they have mastered the mechanics of writing and they can read and understand directions and instructions.

If we look at the few 18-year-olds, they can calculate the area of a square; they understand probability; they write excellent essays and have discussed aptitude test results with anyone who could advise them about career plans.

Now, that is a very quick review of what we found that students know and can do. If we look briefly at the three aras where we have reported change, we found that in the area of science there was a decline at all age levels. The only improvement we found was the performance of black nine-year-olds in the southern part of the United States.

In reading, the performance of 13 and 17-year-olds changed little between two assessments. However, again, the 9-year-olds read a little better. If we look at the black nine-year-olds, there was even more improvement, and if you look at the black nine-year-olds in the southeast, again there was a rather dramatic improvement.

In writing again, we found some improvement at the nine-year-old level, but we also found that the 13 and 17-year-olds were using simple vocabularies; they were writing in shorter type statements and the ability to write coherent paragraphs had declined.

Now, what does all that mean when we talk about "back to the basics"? Our data suggests if you look at the basics as being just simple computation, literal comprehension and writing mechanics, that many students are performing these quite well. But if you consider basics to be the ability to apply those three skills, which I just mentioned, then the data suggests that we certainly have a problem. The data collected, that we have collected since 1969, however, suggests that we have always had that problem, so it is not a matter of returning to the basics, but a need to proceed with the improvement of the instructional process to provide more students with these basic problem-solving and application skills.

Now, the data again do not suggest that all is well. To the contrary, we have some problems. We conducted a special study for the "right to read" program and using a functional literacy standard which the "right to read" effort determined, 13 percent of the 17-year-olds that were in school at that time were considered to be functionally illiterate. That is to say, at least one out of ten of the students nearing the end of their high school education is still not able to do basic everyday reading tasks. It is important to note that the ratio changes with the type of community in which the student lives. If we look at the high socioeconomic metropolitan areas, the ratio is as small as one out of twenty students, but as we move to the inner city, the lower socioeconomic areas of the country, the ratio exceeds one out of five.

All of our data have demonstrated that we have this gap between the haves and have-nots. In the case of reading at the nine-year-old level, it appears that the gap is closing. We don't know if the gap can be completely closed. The data is not available.

As I indicated, we have data available to demonstrate the gap can be lessened.

The need for additional emphasis on the basics does not apply in the same degree to all segments of our student population. The special needs of students from low-income areas and students whose parents did not achieve a high school education are well documened by our data.

Apparently the nation's efforts to provide equal educational opportnities has not yet resulted in equal educational benefits for all of our country's students.

Thank you. I will be glad to respond to questions.

Mr. MOTTL. Thank you very much, Dr. Forbes, for your interesting testimony.

Next we will hear from Dr. Verne Duncan.

[The prepared statement of Dr. Duncan follows:]

SUPERINTENDENT OF PUBLIC INSTRUCTION
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COMMITTEE ON ELEMENTARY AND SECONDARY EDUCATION
MAY 11, 1977 - Washington, D. C.

TESTIMONY BY Verne A. Duncan
Oregon Superintendent of
Public Instruction

I appreciate this chance to share with you some of Oregon's experiences in competency-based education.

With few exceptions, public high schools in Oregon, as in other states, had always stated educational requirements in terms of units of time spent on subject matter or in attendance in school. Graduation requirements had not been changed substantially since 1932, and students were required to spend a specified amount of time on specified subjects. The result was that all students went through a very similar program, regardless of their needs, interests, or abilities, and with little attention to the development of skills each individual would need to cope with modern society as he/she left school to take the next steps as a member of the community.

In 1969, the State Board of Education undertook to revise the graduation requirements to make schooling more relevant to real-life situations and to respond to a growing concern of business, industry, parents, and our own state legislature that high school graduates did not have the necessary basic skills - reading, writing, and math - to function in jobs or in college. It was widely felt in many cases that the high school diploma meant little more than that the student

HAD SPENT FOUR YEARS SITTING IN CLASSES.

AFTER TWO YEARS OF HOLDING "TOWN MEETINGS" THROUGHOUT THE STATE TO HEAR HOW OREGONIANS FELT ABOUT THEIR SCHOOLS, THE STATE BOARD OF EDUCATION BEGAN A MAJOR REVISION OF MINIMUM STATE STANDARDS WITH THE INITIAL EFFORT TO MAKE MAJOR CHANGES IN GRADUATION REQUIREMENTS. A SERIES OF HEARINGS AND REVISIONS, SECOND AND THIRD DRAFTS TOOK PLACE, AND IN 1972, THE CURRENT SET OF REQUIREMENTS WAS ADOPTED, FOLLOWED IN 1974 BY REVISION OF THE TOTAL STANDARDS TO REFLECT AN APPROACH TO IMPLEMENTATION OF COMPETENCY-BASED EDUCATION.

BASICALLY, THE STANDARDS CONTAIN THE FOLLOWING:

1. EACH DISTRICT MUST DEVELOP GOALS FOR PROGRAMS AND COURSES WITH COMMUNITY INVOLVEMENT THAT AGREE WITH THE STATE GOALS. STATE GOALS FOR EDUCATION IN OREGON ARE THAT EVERY STUDENT SHALL HAVE THE OPPORTUNITY TO LEARN TO FUNCTION EFFECTIVELY IN SIX LIFE ROLES: LEARNER, INDIVIDUAL, FAMILY MEMBER, CITIZEN, PRODUCER, AND CONSUMER, WITH 21 REQUIRED AREAS OF STUDY, INCLUDING 10 ELECTIVE COURSES.
2. STUDENT TRANSCRIPTS MUST RECORD THE SKILLS EACH STUDENT HAS ACQUIRED TO DEMONSTRATE KNOWLEDGE AND UNDERSTANDING OF SUBJECT AREA AS APPLIED IN REAL-LIFE FUNCTIONS. THESE STATEMENTS ARE WHAT WE REFER TO AS "COMPETENCIES." THEY DESCRIBE AN EXPECTED OUTCOME OF LEARNING AND PROVIDE FOR INCREASED ACCOUNTABILITY OF INDIVIDUAL STUDENTS AND THE SCHOOL SYSTEMS THAT SERVE THEM.
3. EACH LOCAL DISTRICT MUST PROVIDE FOR THE MEASUREMENT OF STUDENT PERFORMANCE IN READING, WRITING, AND COMPUTING WITHIN THREE INSTRUCTIONAL PROGRAM AREAS AND REPORT THE RESULTS TO THE COMMUNITY BY 1979.

4. Each local district is also required to identify each student's individual learning, strengths, and weaknesses and provide appropriate learning experiences. Progress records must be maintained and the information reported to parents and students.
5. Teachers are required to publish descriptions of courses. Such statements include the goals to be achieved, the context to be covered, and the evaluation methods to be used.

The heart of a competency based education program is the identification of the minimum abilities each student must attain in order to function in society. Of course these "minimums" are only a starting place for the majority of students, and most will attain a far greater amount of competencies than the minimum required for graduation.

Another key to the competency based curriculum in Oregon is that the State Board gave much leeway to local districts in developing their own goals and competency statements. The Board felt that involvement of teachers, board members, and the community in setting their own goals and determining how student skills would be measured was important.

The graduating class of 1978 (this year's juniors) was the first group of students selected to go through high school under these new standards. We have had some problems, as well as some successes. Many districts felt that the standards required too much change and not enough time to gear-up for the change. Some teachers felt that the recording of competencies added a great paperwork burden, and some legislators feel that the competencies developed in their districts were too minimum. Despite these problems, many districts feel there have been benefits from the new program. One, it required that teachers from all subject areas and grade levels talk to each other

IN DEVELOPING GOALS, AND THIS HAS MADE FOR A MORE INTEGRATED PROGRAM. COMMUNITY INVOLVEMENT HAS INCREASED, AND MANY PARENTS HAVE EXPRESSED PLEASURE IN KNOWING WHAT STUDENTS ARE TO LEARN AND HOW WELL THEY ARE LEARNING.

BECAUSE OF THE NATIONAL INTEREST IN COMPETENCY BASED EDUCATION, THE NATIONAL INSTITUTE OF EDUCATION HAS AWARDED OREGON A GRANT FOR RESEARCHING THE EFFORT AND TO HELP DISTRICTS WITH THE IMPLEMENTATION OF THE STANDARDS. LOCAL DISTRICTS IN OREGON ARE MOVING FORWARD, AND THE LEGISLATURE INTENDS TO STUDY THE CONCEPT DURING THE '77-79 INTERIM.

WE IN OREGON FEEL THE PROGRAM CAN WORK; AND ALTHOUGH IT HAS PLACED ADDITIONAL BURDENS ON LOCAL SCHOOL DISTRICTS, WE FEEL THE END RESULT WILL BE BETTER EDUCATION FOR OREGON STUDENTS AND A BETTER WAY TO MAKE SURE THAT EVERY CHILD WILL HAVE THE SKILLS NECESSARY TO COPE IN OUR COMPLEX SOCIETY.

THANK YOU FOR YOUR TIME AND INTEREST, AND I SHALL BE GLAD TO RESPOND TO ANY QUESTIONS YOU MAY HAVE.

STATEMENT OF DR. VERNE A. DUNCAN, SUPERINTENDENT OF PUBLIC INSTRUCTION, STATE OF OREGON

Dr. DUNCAN. Thank you, Mr. Chairman and members of the committee.

Congressman Duncan was talking about the great things going on in Oregon. I would like to concur we do have great things going on. We were probably the first state to move in the direction of a competency-based educational program for graduation requirements.

Now there are disadvantages to being the first to move in this direction because you can't really profit by anyone else's mistakes, so I can assure you we have made them all and, if anything, I could say I am really an authority on the mistakes that can be made in any kind of a program. I want to put a disclaimer, because many good things have gone on and I want to point out I was not the State Superitendent at the time it was adopted; I was elected in '74 and this work had been done prior to my election to that particular position.

Our State Board of Education was concerned about some of the discussion that has gone on today as far back as 1969 and they started holding hearings around the state to determine what is the expectation of a high school graduate. Obviously leaders in industry and business were unhappy, parents were unhappy, those of us in education were unhappy with many things. What does a high school diploma mean?

They took a look at what was really happening. If we all think back to our own schooldays, the high school diploma—I always say the high school diploma really meant the perseverance and that meant perseverance on the part of the student, the mere fact that he stayed there that long or perseverance on the part of the school that they were willing to work with that student that long.

It really was a test of perseverance involved there. Attendance and a unit of time, really, is what determined whether or not you received a high school diploma.

In Oregon we are probably as strong a local control-oriented state as any state that you could find. So the new graduation requirements—you will note that I don't use the term "high school graduation requirements" because we really look upon this as a total program, the elementary, junior high and high schools working together.

By the way, if there has been an advantage, I think the fact that we do have people working together has been probably one of our strengths in the whole program.

The program was developed, major guidelines were given at the state level. We wanted local school districts to develop competencies in, for example, the areas of reading and writing. Those would be two of the major areas. It would be up to the local school district to determine what competency levels they required to issue a high school diploma.

Another area was that of computational skills, the concern about government, the concern about health. We had about nine major areas. This was left to the local districts then to develop the basic competencies for high school graduation.

I would like to highlight some of the advantages of the program we have had and some of the disadvantages. Right now, if you look at the programs that are moving along in Oregon, I would say we have more emphasis on the individual students than we have ever had before. It isn't a matter of a student just moving into the system and taking various courses and all of a sudden getting a diploma. There are certain competencies they must meet; it is up to the student to work on those, but it is the obligation of the school also to see that the individual meets that competency. It doesn't say where that competency shall be met. Perhaps it should be completed by the time one has finished the eighth grade. We have to work on that program. We see an individual approach going on right now that we didn't see historically.

Another advantage that I have seen is the cross-subject matter cooperation. The English Department was down at one end of the hall and vocational education was way out in the back some place and they weren't concerned about teaching somebody to read and write and the mathematical skills. But we really see all of our subject matter areas starting to work together. The English people, vocational education. We are seeing that maybe it is in the vocational education program where the student really might recognize the need for some of the reading skills. Obviously, if you can't read a blueprint, you aren't going to be doing a very good job of putting that into operation.

If you can't understand the reading concepts or the mathematical concepts that go in there, we find that kind of cross-work going on.

I have taught at all levels and at each level I have heard that level criticizing the other. "If they had just taught them this in the elementary school, we wouldn't have this problem today" or "in the elementary school, the feeling that the high school people are kind of an elitist group up there and we don't care what happens at the elementary level."

We find in our schools where they are moving positively in this particular program that we have elementary, junior high, high school and the universities—now, I have been at the university level too but there was a time when universities were really removed, but the universities in Oregon have become quite concerned about the whole program and that whole group is starting to work together.

We also require that course goals be adopted for each subject in the high school. In other words, if you are sending your student to school, you should know what are the goals of that particular course before the student enrolls in it and what are the expectations and that is all written down. Those are written course goals. We have still maintained the local control. Again, this is done at the local school district level, the local Board of Education determining its own goal, its own expectation and then its own method of evaluation.

Now, there are some disadvantages with the program the way we have developed it. I think as we started we might have expected too much. We gave ten major areas and said, develop competencies.

Some school districts developed 250 competencies. You can imagine the recordkeeping and all of the problems that go with that. We really did get in a bind.

It was a very expensive program because you had to do a lot of inservice work with teachers; you had to bring in consultants to help develop these programs. The extra time and committee work that went into it made it a very, very expensive program.

The term "minimum competency"—we have talked about minimum high school graduation requirements. People say, "Well, I don't want my child to have a minimum."

Well, I think we are really saying that the average student or the far-better-than-average student certainly will have met most of the minimum competencies by the time they enter high school or maybe at the early ninth grade level, somewhere in there. But the word "minimum" has been misinterpreted as a downgrading of the educational program.

Another disadvantage was the local control aspect. I list it as an advantage but I also list it as a disadvantge in that we had one school district doing one thing, another doing another thing, and you had the problem of a student transferring from one district to another or from state to state.

The evaluation process. How do you evalutae when one has met the competency that is required?

Is it a teacher judgment factor only? If the teacher signs off that John Jones has met this competency, then later when he finds out that he really doesn't have that skill, you know, is that teacher liable for malpractice somewhere along the line.

Those are terms only physicians worried about in the past, but I am sure you realize educators are starting to be concerned about that.

We have had advantages and disadvantages with the program. Frankly, I was skeptical when the whole concept in Oregon started, the minimum competencies. As I have worked with it and as I have visited schools throughout our state, I am really very positive about the concept. I would urge that local school districts and states move into it casually. I am not anxious about a lot of state-mandated rules and regulations. I really do think it can be done at the local level to greater advantage than if you just make a lot of mandated rules.

My testimony is available for you and I would be happy to answer any questions that you might have about our particular program.

Mr. MOTTL. Thank you very much, Dr. Duncan. We certainly appreciate your testimony.

I have to leave in just a few minutes and my good friend from California, George Miller, will take over the chair at that time.

If I can just proffer a couple of questions to the panel here and you may respond as you deem fit—I have been reviewing elementary and secondary education over the United States and I am concerned that my own home state of Ohio is not doing the job. I have seen the declining test scores over the years and I think there have been many articles written to the effect that we have many students who are functionally illiterate going out into society, who cannot handle simple rental agreements when they look for an apartment, who can't write out a check and can't get along in society.

I know the great emphasis education has received in the last few years, and rightfully so, also the emphasis on vocational education, but if a person can't read or write, he is not going to be able to do the job even if it stresses vocational education. This has really bothered me.

I introduced a bill on setting up standards of educational proficiency applicable to secondary school students and I think now 17 states in the United States have set up these educational proficiency standards, whether it be by testing or some other criteria.

You are to be complimented in Oregon for, I think, going in this direction. Though you don't have testing, you allow the teacher or school districts to decide what are the minimum standards there.

What can we do in the Federal Government to encourage the states and local school districts to go into this direction? Should we have a threat that we will take away some of their funds? Shall we hold a carrot out and say, "If you go in this direction, we will supply funds for testing?"

May I have your thoughts in this area so we can get back to some of the basics, so that our students can go out in society and function? All of our students. Do you have thoughts on this? I stress this to all of you.

Dr. WILEY. It is surely true that we have some serious problems, especially in our secondary schools. One problem that I think I see is the concept of minimum competency. This is easiest to apply at lower levels of education. Once we get into the secondary school——

Mr. MOTTL. It is too late?

Dr. WILEY. Not that it is necessarily too late, but the curriculum, the kinds of experiences that children participate in has started to diversify, so that the kinds of content that are taught in secondary school, some children legitimately don't receive some of that content and other children do. If you want to set standards for high school graduation, it is much more complex to determine what a child should have when he ends secondary school than it is to determine what skills he should have at the end of elementary school.

I don't believe these differentiations have yet been made and discussed very thoroughly.

It is clear that we need to set certain kinds of minimum standards, but it is not clear what those standards ought to be and in what content areas and with what specification.

Also, one of the things I worry about which I haven't heard discussed with respect to graduation requirements from secondary school is the fact that if you give school districts rewards of some kind for setting up standards and if you don't handle the problems of what happens with respect to the proportion of kids who are completing those standards versus the proportion who drop out, you may get a negative incentive per dropout. That is, you may find that kids are encouraged to drop out early because they can't meet the standards and because they are dropping out early they don't get those additional experiences that would be very valuable to them, and if school districts especially are not—if we don't think about how carefully to reward them, if we want to establish such a system and what are the incentive characteristics, we might be making some serious errors.

I haven't seen a full discussion of the dropout problem and the relation of that to minimum competency, but it seems to me that needs to be much more fully flushed out.

Those are my comments on minimum competency.

Dr. DUNCAN. I would like to address myself to your question about the role of the Federal Government. I guess I would make the same comment I would make if I were talking to our own state legislature today. I really think that the best work can be done if that local district and the staff members within that local district are sitting down and actually developing some of these programs themselves.

There was a movement this year in our legislature—well, there were several movements. One was to abolish the whole system. As you can imagine, it does have its critics. Many teachers were opposed to it and I really think teachers who didn't understand and maybe were in districts who had not worked through this very well, but in other districts I really have been rather excited seeing the working relationships going on within the district where the teachers have really gotten together and for the first time we are sitting down and talking about curriculum concerns. I have been through many, many faculty meetings where you were trying to determine which activities would be held the next week and, you know, the relations between athletics and music and those concerns from an activity standpoint, but really, you are seeing faculties now talking about the curriculum program. We are saying that subject matter areas must look at the major competence here.

Let's take the reading skill that we require. That is not just the responsibility of the reading teacher. In other words, that competency must be addressed—well, by 1978 you must have accomplished it in three other subject areas. Maybe in science they have a responsibility in the area of reading. The same thing with math. They would have a responsibility and by 1981 you have moved that to three other subject areas. So we are talking about all subject matter areas really getting involved in the concerns of the reading skills and the concerns of the mathematics skills and so forth.

The exciting thing I see right now, you see a faculty sitting down working this out together. If you were to have a state mandate or a Federal mandate that "These are the requirements, 1, 2, 3, 4," I think you would lose some of the really exciting things that I see happening right now.

Dr. FORBES. I guess my comments would be echoing yours to some extent. We have been receiving numerous requests each month both from the state and local level from agencies that are interested in putting together minimal competency-type examples or programs. The Education Commission of the States provides a service to keep other states and locals informed of what legislation is happening to various states and they update it about every week now. Things are moving very rapidly.

We in the project of national assessment provide the objectives we use for writing or exercises or test items.

Two state agencies are interested in developing either the curriculum or a testing program for measuring how well they are doing.

We have been very successful in helping to provide technical assistance to people where they can select out what is useful to them, what meets their local needs, and in that way it helps them to develop ownership at the local levels in establishing these programs, but it also keeps them from having to reinvent the wheel completely because of all the numerous materials which are already available.

I think a role the Federal Government could play would be to help support financially either through providing direct dollars or being able to provide technical assistance to state agencies and in turn to local districts so that those would then have the capability to be able to respond to that need. As Dr. Duncan indicated, it is quite an expensive process and one small district trying to do it by themselves is almost impossible.

Mr. MILLER. (Presiding). Mr. Kildee.

Mr. KILDEE. In reading the *Washington Post*, I read that one of our local teacher training institutions was graduating four students who are not able to pass the basic math exam, including how to add fractions or even the concept of what we used to call the least common denominator.

What is the relationship between teacher training and student performance? Is there a problem throughout the country in that relationship?

Dr. FORBES. If I may take the time just to tell a brief story, when I was in school I walked by a class and there was a group of students taking a test—this was in college—and it was elementary school teachers—I will have the whole elementary school teacher profession down my back for this one—but they were visibly trying to answer a question and one came out smiling and I asked what the question was. She went through a rather lengthy question. It started off, there was a mile long train, and then it gave a lot of information about how fast the train was going, in which direction the wind was blowing at a certain speed and a lot of other stuff, and the question was how long was the train. Here was a group of people having difficulty solving that problem. This was a math examination.

That day I decided I would make quite sure as my kids were moving through school and since I was a math teacher, I would be able to help them overcome any deficiency that might result from the training process.

Then later, when I was teaching, I got involved in a new curriculum, a new aproach, and got so engrossed in the details of what was new that I tended to forget what was old and proven and helpful to students.

I think an example of where we can do better in teacher training is to provide teachers with more methods, more instructional techniques and help, so they would be able to do a better job.

I worked in a large city school system in evaluation and research and also had the responsibility of devising in-service training programs for teachers. We found the majority of the teachers did have good jobs and were well trained. For those small numbers where we had problems, we tried to work out programs whereby the teacher training institutes would not only help the teacher in the formal classroom setting but then would come in and demonstrate to the teacher those techniques, methods, the theory that they were trying to put across in their clasroom and we found the working relationship between the school system and the university or the teacher training institute is very helpful in improving the program. Briefly, we do have some problems in that area and they should be addressed.

Dr. DUNCAN. I am sorry I didn't read the article. I did catch it as I was getting out of the cab this morning. They just mentioned it on the radio and I am still operating on Pacific time so I didn't get up early enough this morning to read the papers.

I mentioned earlier that we are seeing more cooperation with the universities right now than we have ever seen before. It seems universities are coming to us and saying, what are your needs out there, as they define their own programs in teacher training, so this is probably one of the real healthy things that has taken place as a result of our program.

You know, I am assuming that we will always have the problem that someone is not as competent as we would like to have them be, but I would hate to think—if I heard that last part right this morning—that the people who were teaching had failed the mathematics competency of that particular school.

I am thinking right now—and I will check when I get back with our own standardization program and so forth—that we would catch that because I think we do have some basic requirements before they can go into teaching.

Mr. KILDEE. Hopefully they will not be math teachers.

Dr. DUNCAN. I would agree with you on that one.

Mr. KILDEE. Having been a member of the teaching profession for ten years before election to public office, I certainly believe that by far the vast majority of teachers are competent. I really believe that. However, I think that probably at this point in our nation's history that local school boards and those who set standards for the profession, such as yourself, are in a position to be far more selective in hiring teachers and setting standards than we could have been even ten years ago. I can recall when I first entered the Michigan Legislature, at that time some school districts were almost happy—I say almost happy—if they could get a warm body hired to fill a classroom. That switched almost overnight. I think we are in a position now where we can be selective in picking individuals and also much more strict in our standards for those entering the profession. I think we should seize the opportunity to do that at this time.

Dr. DUNCAN. I agree. This is a beautiful time to be hiring. I recall I was a superintendent hiring back in those days when you were thrilled to have someone walk in the door and you would hire them. I can even recall having hired somone by mail. From Michigan, by the way.

Mr. KILDEE. I am sure they were competent.

Dr. DUNCAN. The information I have right now, as we talk about oversupply in the teacher market, while I am not an authority in that area. I still think we need to be careful that people don't get impression that there just is no place for them in education now so they start finding other areas, and that we find ourselves in the vicious cycle of getting caught up again and have to go back to hiring just anyone because people steered clear of the teaching profession.

I have heard people say we need to cut back on teacher training programs and so forth and I say frankly I kind of like the position we are in right now—I am glad I am not looking for a job, frankly, but I like the position of being able to be a bit more selective. We haven't had that privilege for a while.

Dr. **Wiley**. Let me comment. It seems to me that we have a lot of grounds to be dissatisfied with the school system probably at all levels and with teachers and with administration and the way in which the activities go on in classrooms and outside of them. I think we should try to be careful about the sources of our dissatisfaction.

As I indicated, the test scores have really not declined at the lowest levels and in those content areas which are most basic—that is, in basic reading and writing skills, in literacy skills, and in basic computational skills, there is no evidence of any decline at all. That does not mean that we can't be dissatisfied with performances at that level because I think we have grounds for being dissatisfid with performances now as we did ten years ago and perhaps we just didn't recognize it ten years ago. But we should be careful not to link the decline itself to specific actions unless it is justified and I think the decline has occurred at the higher levels and with higher level skills, mostly in secondary schools, and so if we want to be concerned about the difference between our educational system now and what it was ten years ago, then that discrepancy is related to secondary schools mostly.

At the primary school level, if we are going to be dissatisfied with achievement levels, it should not just be because there have been declines, because there haven't been declines, but because we are really dissatisfied with either the goals for children at those levels or the way in which they are meeting those and that is not a change from ten years ago.

Mr. **Kildee**. Thank you very much for your responses.

Mr. **Miller**. Would it be correct to say from your testimony—you went through a litany of experiences by students, changes in the lifestyle, television time, family life and so forth, that you don't see those as having a major impact on test scores, that you see a change in curriculum. Is that the bottom line of your testimony?

Dr. **Wiley**. No. What I said is made up of two things. One is, it seems to me the domain of political action with which I am most familiar has to do with the schools. That is, we do change our schools and states change their schools, local districts change their schools. They can do that. A school has less that it can do about its more broad societal environment than what it can do within the walls of the school.

In my view, there is less potency of the society in influencing these broader changes, so I pay attention mostly to what goes on in the schools.

The second point is that the societal changes undoubtedly do impact on test scores but I believe that most of their impact is via the schools. That is, when children are taking—when the curriculum diversifies and children are taking ecology courses instead of biology courses, that is at least in part a consequence of changes in parental attitude, changes in children's attitudes, and changes in administrators' and teachers' attitudes about what is important for those children to learn at that particular point in time. That comes directly from the changes in society. I understand that society changes likely play their role out in the schools.

Mr. MILLER. My concern was that it appeared that you were discounting those changes rather dramatically. I understand what you say in terms of the children taking drugs in early ages, obviously if they are not in class it will show up in the school; if they are watching TV and they are tired and are getting a different look at the same problem it is being channeled through the school.

Dr. WILEY. I don't know what to do about that. I think I have more concrete suggestions to make about what goes on in schools.

Mr. MILLER. I understand that, but as we talk about changes in the school system from the Federal level, whatever such changes might be in terms of political reaction to declining test scores, I guess we could assess criminal penalties to bad teachers, but I am not sure that would change very much in terms of what is going on in society, in test scores or in the last room. My concern is that, for the committee's sake, while that may not be your area of experties in terms of what the impacts are, in terms of the makeup of the student population, I think it is something we ought to be concerned about, whether it is television, drug use, divorce rate, working parents, leisure time, diversification of interest and so forth, recreational habits, all of which would seem to have a dramatic impact on how that child acts out the time that is spent in school.

Dr. WILEY. I would definitely agree. I don't know that it is a matter of expertise so much as it is a problem of information.

In our lengthy review of the phenomenon of test score decline and our attempt to pull out information that would relate to causes, we look very extensively at demographic changes; we look very extensively, or try to, at other changes in the society which are not so easy to pull out from demographic data.

The problem is that—one of the problems is, it is very difficult to pull that out. If you look at television as an example, we have figures on the number of hours that the television set is on in the home, on the basis of some sample survey data. We don't know who is watching.

Mr. MILLER. Or if anybody is watching.

Dr. WILEY. We don't know at what ages children are heavy television watchers and at what ages they are not heavy television watchers. A lot of work has been done on violence, but little work has been done on the amount of time that television takes out from study time. The problem is that in the societal area in terms of those particular aspects that are most likely to relate to children's achievements, we just don't have very good information. It is hard to say—it is hard to put in an excessive speculation to some testimony that is based on very little data.

I obviously emphasize those things that I know the most about.

Mr. **Miller**. It also seems to be your testimony that the testing of skills which you would call the basic level, the lower levels of education, the elementary level, have not declined significantly.

Dr. **Wiley**. No. In fact, they may very well have increased.

Mr. **Miller**. But there has been a decline in the advanced skills as reflected in what we would expect or have expected in the past of secondary students.

Dr. **Forbes**. That is right. But it is the middle advanced skills. we found that the number of good writers, for example, remained the same, but the number of poor writers increased, so it is that middle group that was disappearing on us and sliding downward.

Mr. **Miller**. Repeat that for me, please.

Dr. **Forbes**. In the area of writing, we found that the number of good writers remained the same, but the number of poor writers increased, so it is that middle group, the group falling between good and poor that was sliding down toward the poor end.

Mr. **Miller**. What do you infer from that in terms of what happened in the next five years of education?

Dr. **Wiley**. Let me comment on that too. That is the same kind of pattern that occurs in mathematics and in science. At the very top end of the distribution--that is, children who are taking advanced courses in science and advance courses in mathematics, which is a relatively small proportion of an age group, the skills haven't really declined. If you look at the SAT score distribution in mathematics, at the very top range the number scoring at the top level hasn't really declined very much. It is in verbal skills or when you go down into the distribution that the declines have occurred. So that there does seem especially in the technical areas—I guess I shouldn't call them technical aras—in the science and in the mathematical areas there is at the very top level little evidence of a decline. It is in the broad middle that the decline occurs.

Mr. **Miller**. What happens? Is it the educational foundation in preparing those students in the first four or five grades, it was not sufficient to carry them to the other levels or did they lose interest or is this a product of what you call diversification?

Dr. **Wiley**. I don't think there is any evidence that would suggest that the education the children receive in the first four grades—I mean we haven't very much evidence about changes in the elementary school curriculum activities because that is an area that hasn't been very popular to collect data about. But we don't have any evidence in the test score patterns that wouldn't lead us to conclude that children are being seriously more miseducated now than they were ten years ago at the lowest levels, and that that is not likely to be a real problem in the decline.

The problem probably occurs at the higher levels in junior high schools and in secondary schools with respect to the fact that children generally are not receiving as much education in secondary school as they used to and that they are receiving a more diverse education and the diversity of that education doesn't match the tests as well.

Mr. **Miller**. Would it be correct to infer then that your comments on the diversity of the education means that that education somehow is not calling upon that student to use the skills learned? If you take ecology versus biology or you are somehow not using the skills from your basic education—from the basic education that you learn in the first six years—is that what you are suggesting? It seems to me there is some backsliding or there is something lacking in the education to cause the children to move into more complex sentence writing, more complex reading habits. What is it that is not challenging them or causing them to make this transition, whereas it is happening at the very upper levels of the students? The students who decide to go on to advanced mathematics, to advanced science, to the more traditional college prep educational system.

Dr. WILEY. I can't tell you precisely why children at that level don't write as well. I guess in general my belief on what happens is that the kinds of experiences that children are offered in early and middle secondary schools are diverse and are not systematically related to the kind of writing practice that would be required.

Mr. MILLER. In the district I represent, there seems to be a number of substitutes for reading, and the continuation of reading skills. There is a number of substitutes for writing. There is a number of substitutes for verbal reports, as students take the more non-traditional courses that are offered in an ever-increasing number in high school.

I just wonder, is there some relationship there?

Dr. WILEY. That is what I mean when I talk about curriculum diversification and children are offered a wider range of opportunities, and the kinds of experiences they have in taking up that wider range do not match the traditional, do not match the writing tests that the national assessment gives, and they do not match the traditional curriculum measured on most tests.

It's a question then of values and political discussion about whether the experiences that they are receiving are to be valued as highly as the traditional experiences that are measured on the tests.

Mr. MILLER. I want to come back to that, but I want to let other Members of the committee ask questions. From my notes I want to know if you are telling us if the test failed to measure the experience without passing on the merits of the experience, or whether the tests are failing to measure those educational experiences, diverse as they may be, or whether the tests are, in fact, measuring the proficiency of the student and the student is failing, and is, in fact, worse off than the student ten years ago.

Dr. WILEY. The answer to both of the question is yes; that is, in terms of what I value as basic skills, the student is worse off than he was ten years ago.

Mr. MILLER. He is not worse off at the lower levels?

Dr. WILEY. Not worse off at lower levels, and he is not only worse off, he is also better off in some ways. That is I value some of the curricula content change as better.

Mr. MILLER No question about that. A lot of people would suggest if we put all of our efforts in the first four or five years of education, that somehow this student will have all of the freedoms of the necessary tools to advance throughout life. That may not necessarily be so, because unless you can really move some of the advanced skills to lower levels as we have seen down in a number of pilot projects, it doesn't necessarily follow that the good fifth grade reading skills will carry you through and create enough interest and ability to make the various transition to more difficult materials.

Dr. **WILEY**. That is true, but it also doesn't imply we necessarily ought to shift resources from the lower end to the upper end, because if we were to do so, perhaps what we have is a foundation for whatever we are going to do at the secondary level.

I worry a little bit about, since educational resources are now so limited, we don't have very much resources to give out, and we are certainly not going to do major increases in resource allocation over the next ten years, and so we have to really worry about what levels and to what purposes we allocate those resources.

Mr. **MILLER** Thank you.

Mr. Pressler?

Mr. **PRESSLER**. Yes. I wanted to ask you about the regional differences you have found in your study. Do you have this broken down by States in terms of decline? I am looking at the achievement test score declines; is that broken out by States? Do we need to worry,?

Dr. **WILEY**. No; all of this work was concerned with trying to elucidate national trends. We have a little bit of information on regional trends, but I would say Roy Forbes would probably be able to give you more specific information regionally because the national segment data are specifically broken down into regions, and so they do report directly on differences in regional trends.

Mr. **PRESSLER**. How can I obtain those or do we already have them here somewhere.

Dr. **FORBES**. The regional trends would indicate that the southern part of the United States historically has performed below the rest of the country. When we first started collecting data it appeared the northern part of the United States scored above the rest of the country. That seems to have shifted now to the central part of the United States with the Northeast and the West sitting kind of right at kind of the national average type now.

Over the last several assessments we have been watching the shift where the Southeast is beginning to close that gap between their performance and the other three regions.

Mr. **PRESSLER**. Now the declining test scores in the basic skills, could that be caused by a loss of the work ethics or an attitudinal change and not really any other explanation? What is your view on that?

Dr. **FORBES**. Again, as they have collected data from national assessment, and as Dr. Wiley has pointed out, we have found there is not a decline at the early ages, and in the case of science we did find a decline. My personal view would be I would support what Dr. Wiley has been saying, that fewer students are taking science courses at the higher grades, and, therefore, that is probably what is reflected in that.

If I may go off on a tangent just a moment, we did ask the science people to come in and look at our data to be sure we were measuring what was currently being taught in school and they can come in and take up a set or subset of examples or items they felt was currently happening; there is still a decline in science.

In the areas of reading we found essentially no change, but if you look at it very closely we will find a decline in the ability of students to infer what they have read. There is a decline in those schools that serve students from high income familes or upper middle income families.

In the case of writing, and again we found some declining in the students' ability to be able to write coherent paragraphs, but if you go back and look at the essays they wrote, those essays communicate style, but they communicate more in the style of the newspaper or the style that you hear over television, and not in the style of what would be classical writing.

The data that we collect is such that we can't state any causal type of relatioships, so any cause for decline would be a personal guess on my part.

Dr. DUNCAN. Mr. Chairman, if I might comment on something that hasn't come out today, and I am not a statistician, but I think we should keep in mind we have many students in school today who wouldn't have been in school 20 years ago even, and as you go back 30 years ago, they just weren't there. There was a time when you could drop out and go to work on the farm and you just didn't go on.

I think we are going to see even a different type of student in schools now as we move in the direction of P.L. 94-142 in special education, and now in Oregon we did move in that direction several years ago, and our law says we will educate all children, must provide an educational program for all children now, whether they are in a mental institution or wherever they are, and those students will be appearing in our averages.

I think as we move forward now, and by 1978 when the implementations of the new Federal law go into effect, we are going to see more students involved in those averages.

Of course, no matter how we play with figures, we are always going to have 50 percent above the average, and 50 percent will be below, but I think we do need to keep that figure in mind as we talk about it.

Mr. KILDEE. Mr. Chairman, would you yield?

Mr. MILLER. Yes, I yield.

Mr. KILDEE. To follow through on that statement, when I taught school, I used to take solace in that thought a bit and it still may be correct, but I am not really sure. I used to explain to the employers in Flint that we were educating students who, while they were in high school would not have been in high school and that is why you find people graduating from high school who can't spell. That probably still has some legitimacy. I wonder whether we have measured that in any objective manner. Is there a way we can measure the type of student who was in high school 30 years ago, and compare that type of student with that same type who is in high school today and see whether there is any diminution of the skills.

Dr. WILEY. Let me just say something about that: The evidence that we can retrieve about the change in pupil position of those completing secondary schools, is that it's limited, but the information we have would indicate that it hasn't changed over the last ten years. The dropout rate was continually decreasing until about ten years ago. It established that the percentage of an age group now completing secondary school has been essentially constant for the last ten years, and that is over the whole range of the test score decline. So it would be very difficult to say that there is ay direct effect of student composition in the secondary school tests on test score decline.

Mr. KILDEE. That would be in the last decade.

Dr. WILEY. Yes, and that is where we have had the decline, yes. So I would agree with you. I think that is not an excuse that we can take anymore. We could have taken it if the scores had declined earlier, but they didn't. They went up.

Dr. DUNCAN. I think my caution was coming out as a result of new laws, particularly I know our own law, and now the Federal law that will go into effect. I think there will be an impact as we move in that direction, because I think we are definitely seeing it in our State now, because our law has been in effect since 1973.

Dr. FORBES. We do in national assessment collect data for the 17 year olds not in school as well as the 17 year olds in school, and the data that I have been quoting in both reading and writing includes that out of school 17 year old sample.

This year we will be collecting some data for that adult population for the second time, so we will be able to see what changes have been made. One of the questions we asked the young adult population is how many years of school they have had. So historically there is not the data that you ask for, but with the data we are collecting now, historically there will have been in, you know, 20 years from now.

Mr. MILLER. Mr. Buchanan?

Mr. BUCHANAN. Thank you, Mr. Chairman.

Dr. Wiley, we have recently taken action here on career education. I wonder if you see any connection between career education emphasis and the test score changes.

Dr. WILEY I don't know whether that is a planted question. I have made some remarks, not in the testimony.

I do see a problem. If we look at the fact that over the past recent period of time there has been a drop in the total amount of course taking among secondary school pupils, we have to really ask why that has been the case,

Why are pupils taking fewer courses in secondary school now, and since that decline in course taking has been relatively dramatic and over a relatively short period of time, the question really is why, and the speculation that one can make—and it's only a speculation—because data have not been systematically collected in that area, but which does not meet some of the experiences of school people, is that children are engaging in work study programs to a much greater extent than they used to.

Perhaps the typical secondary school pupil is now enaging in work study, and perhaps that wasn't true before. If that is the case, then those kinds are not taking standard courses. To the extent that the career education movement might encourage districts to, when they have resource constraints, to implement career education programs that involved work study, because they are less expensive to implement, then career education could have had an effect on test score decline via the fewer amount of courses that pupils are taking. That is pretty speculative, but that seems to me on a speculative basis, at least without having very much direct evidence, to be an important factor that we might look very carefully at.

Mr. **BUCHANAN**. Dr. Forbes?

Dr. **FORBES**. Yes. We collected data in the 1972-73 school year in what we called occupational development area, and one of the questions asked was the type of activities the students had been involved in. We found those students that tended to perform least well also had been those students that had not participated in those activities.

We are going to be assessing again about three years from now picking up the same type of information. At that time we would be able to answer your question explicitly. The indication would be that in 1972-73, and this is before career education really started rolling, I should hasten to add, that we weren't finding that type of relationship.

Mr. **BUCHANAN**. Do I gather from your responses to the Chairman that even taking into account the larger number of students that may be involved in testing, the inadequacies of testing, such factors as possibly career education and whatever impact that may have, that there still is evidence that something is the matter and there is a real decline, notwithstanding these explanations?

Dr. **WILEY**. There is a real decline in those things that the tests measure. In general the things that the test measures have been those areas that have been traditionally valued. So definitely there are achievement dcreases in those areas. To act upon that for purposes of change or remediation, we need to carefully consider what is not measured as well as what is measured, and we need to have a lot of political discussion about that.

Mr. **BUCHANAN**. Dr. Forbes?

Dr. **FORBES**. It's possible, since our data tends to disagree with some of the standardized achievement testing data, and since we do attempt to measure exactly what is being taught, that that could be the reason for the differences, as a guess.

Mr. **BUCHANAN**. I have some concern that we are dealing with an establishment that may be a little bit hard to change, and that there may be a certain tendency to say everything is really all right, it's really this factor that is different. So I hope we can get some movement out of such research as your own.

Dr. Duncan, I am really intrigued by our Oregon program, but there is one thing I want to ask you. You say on page 3 of your statement, "Another key to competency based curriculum in Oregon is the State Board gives much leeway to local districts in developing their own goals and competency statements." I wonder if this may entail some problems as well in terms of what minimum standards are, to give so much leeway to local districts.

Dr. **DUNCAN**. Mr. Buchanan, it's an advantage and a disadvantage, and I mentioned that a little bit earlier. We find that the advantage of the whole situation is that teachers are really becoming very involved, parents in the community are very involved in setting those goals, and in fact, that is of of the state requirements, that you will have community involvement in setting those goals and the competency requirements within a school district.

That has been a plus. The disadvantage, of course, when you leave something to a local level, may be they don't do it just as you would like to see them do it. Maybe there isn't the commitment to the program at that local level. I find occasionally where the superintendent of schools will say it won't work. There is a darn good chance it's going to have a real problem right there, just because of the attitude that exists there.

So we do have problems by leaving it to the local district.

At this particular point I would say the advantages are outweighing the disadvantages, and I should preface that really by applying my bias to kind of a very strong feeling of local control, so I better make that clear.

Mr. BUCHANAN. Thank you.

Dr. DUNCAN. I spent most of my career at the local level, and I also cursed Salem when I was at the local level and now that I am at Salem, maybe I have less confidence in Salem than I did when I got there. So I really do have a lot of confidence in the local.

Mr. MILLER. Dr. Duncan, if I understand your program as outlined in your statement, I think it's been misinterpreted by some people or maybe I am misinterpreting. It's not a question of a proficiency example for students to graduate from high school. It's a question of I guess what we call around here full disclosure of what you can expect if you involve your children in that school, and what that child may expect or student may expect if he or she decides to take a specific class.

Is that correct? I mean, you talk about teachers are required to publish descriptions of courses and statements including goals to be achieved. So, unlike students in California, who sue for malpractice, without a course description your students may have cause of action within the course description. The point is that you have tried to relay to students and to parents that certain expectations can be met.

Dr. DUNCAN. That is right.

Mr. MILLER. Is that clear, as opposed to what has become another direction which says well, at the end of the eleventh year we will test you to see if we have taught you anything. It seems somewhat different.

Dr. DUNCAN. That is right, Mr. Chairman. We do not have a State proficiency test.

As a matter of fact, just the other evening I was looking at my niece's competency requirements; she is a junior in high school, and she will be graduating with the class of 1978, which is the first class really that will come under the new requirements.

She had a computer printout deal at home, and we were looking at it and it had all of the copetencies that were required.

Now, remember, these are minimal competencies, and she is a rather good student, not the most outstanding, but she is rather good, so the competencies are really no particular problem for her. The computer printout had a checkoff on those competencies that she had met.

Mr. **MILLER** How do they meet those?

Dr. **DUNCAN**. She met those competencies, and it varied by the competency, and I don't know the exact details of each one of them. In some cases it was just a matter of a teacher signing off. I guess, as a matter of fact, in all cases it would be a teacher signing off on that particular competency. Now whether the competency was given as a class test and if you had passed the test, they assumed you had met the competency, that could be done.

Maybe it had been an individual test, for some student who was way behind and finally had met that, then it would be an individual testing. The testing again will vary, I mean the requirement will vary from district to district. It might say you will take a newspaper article, read that article, and interpret back to the teacher what the basic information in that article was, and be able to answer specific questions about that article. That way they are assuming you can read at the level that they want. Then they would check off and you could easily look at her list the other night and see where she had met the competencies and see what she had to do before she finished her senior year.

Mr. **MILLER** Then competency, it seems to me, is met under your system as it was traditionally in the old days, in the good old times, simply by passage of the course, by the teacher certifying that you had completed a certain level of proficiency and, therefore, you passed whether it's by signature or by letter grade or what have you.

As I hear concerns by constituents I represent, they don't have a lot of faith that when a member of the family gets a B or a C or an A or a D or whatever, that it really reflects what took place in that class or that semester or that year, that they have somehow lost faith that this is really reflecting what took place, because they have no idea of what social studies one encompasses. They have no idea of what goals are to be met, and what subject matter is to be covered and what is expected of the student when they are enrolled in that class.

They simply know the student is in the class and they got a letter grade at the end. So it seems to me that your program requires a little bit greater involvement by the parent, and by the student in terms of selection, hopefully the parent is involved in terms of selection, and in proficiency, by meeting the requirements outlined in the course outline.

Dr. **DUNCAN**. Remember, we are talking about its being a minimum competency program, and I pointed out there is a disadvantage in that word "minimum". As we talk about the minimal competency, dealing with the A and B student, we really aren't addressing ourselves to that question. In other words, the competency test wouldn't distinguish between the A and B student.

Mr. **MILLER** I understand that. You can't get an A without meeting the minimum competencies.

Dr. **DUNCAN**. That is right, and I assume the A student will not have trouble with minimum competencies.

Mr. **MILLER** This morning's *Washington Post* suggested you could get an A and not get by minimum competencies.

Dr. DUNCAN That is right. Okay. Now the minimum competency, just pasing a course, you could, we are assuming—and this can happen in Oregon—that you could get a D in a course and not have met the basic competency requirement. In other words, you may have passed the course, but there are still specific copetencies that you must meet before you are graduated, and that might come later. They will work with you on that particular skill that you have not mastered.

Mr. MILLER It's an ongoing assessment?

Dr. DUNCAN. That's right.

Mr. MILLER. It starts when?

Dr. DUNCAN. We are working on that right now. Junior high, and I said elementary schools are getting very much involved in this, so they know what the competency requirements are for that school district, so as they develop their program, they are working in that direction. So it's possible that a student would have mastered many of the competencies by the end of the eighth grade.

They could certify at that particular point, of course. It depends if you are a three-year high school or a four-year high school, all of those factors you get into, but it could be written up as long as the district has whatever requirement, however they want to do it at that local level.

Mr. MILLER. Can you graduate withut fulfilling all of the minimum competencies? Could you get all C's and still have some areas where your teacher had not signed off and still graduate?

Dr. DUNCAN Technically, no.

Now, the reason I hesitate on that is because I had a complaint come in my office the other day, and I haven't had a chance to act on it. Someone was concerned because the local school district had made a requirement in order to pass the physical education requirements, or in the area, it's not physical education, it's concern about physical health, but they had put a requirement in there that you needed to be able to swim so far, and that was a competency and that you could not graduate unless you had passed that particular skill.

The complaint has come to my office from a parent saying that we think this is absolutely unfair, that my child just can't swim and psychological factors and all of these things are involved.

Right now I guess I haven't given it a lot of study, but I am inclined to say I hate to see a student denied a high school diploma on the basis of that particular competency. Remember what I said earlier, we left that decision to the local school district, so this is the area of conflict Mr. Buchanan talked about with the local districts. Those are some of the problems we are facing right now with our own program.

Mr. MILLER. Mr. Kildee?

Mr. KILDEE. In conjunction with my earier question, is Oregon's competency based education extended to the teacher training institutions in Oregon?

Dr. DUNCAN. No, not to the extent that we place a requirement on their graduates.

Mr. KILDEE. Do you think that might be a good idea?

Dr. DUNCAN. Yes, but we really are having better luck right now with teacher training institutions than we have ever had.

Mr. **Kildee**. If they are competent though, they would have nothing to fear with the competency based education?

Dr. **Duncan**. Of course, they put the burden back on us, they will comment that had we done the job in the first place they wouldn't have their problems at the university level, so it's always the business of throwing it back to the other person. The university people are working closely with us right now.

Mr. **Kildee**. You certify, do you not? Do you have a competency based certification?

Dr. **Duncan** We really don't.

Mr. **Kildee**. Would you think that might be a good thing?

Dr. **Duncan**. I say yes, qualified, but I really haven't done a lot of work in that area.

Mr. **Kildee**. Is there fear of the politics of that perhaps?

Dr. **Duncan**. I am not sure.

Mr. **Kildee**. I have a great respect for my profession; I am a teacher, but every profession tries to upgrade itself in a continuing fashion and you say you have some fears of the State running roughshod over local school districts. Often local teacher training organizations have their own built-in lobbying groups, and sometimes there is fear to tell them if you are to train teachers that they have to meet certain State standards. In most States I think as long as the institution says they should be certified, the State organization such as yours certifies them. Is that not the case?

Dr. **Duncan**. We are unique. Oregon, again, is the only State that has a system. We do have a Teacher Standards and Practices Commission, and the profession certifies its own members, which is a very different situation than you find in other States.

Mr. **Kildee**. The teaching profession, much like the medical profession in your State, does check competency and that is a step beyond just letting the teacher training institutions do it.

Dr. **Duncan**. That is right. The teacher training institution must meet the requirements of the Teacher Standards and Practices Commission, and that commission is representative of teachers, administrators, board members and lay citizens.

Mr. **Kildee**. That then would act as some type of check upon the teacher training institutions. There would be some objective type of criteria established by that commission to determine whether the teachers were competent then.

Dr. **Duncan** Yes. That commission could say that we will not issue, that your program is not, that we will not accept the students from your program. That very definitely can stop a teacher training institute, so the State does have that kind of control on the institutions.

Mr. **Kildee**. Our Medical Licensing Board in Michigan, for example, would require that the physicians meet certain standards before they would be licensed in Michigan, and that Medical License Board is a step between the training institution and the public.

Dr. **Duncan**. The reason for my qualified answer is that there is a certificatin requirement by this outside body, no examination is administered by that group. They set the course requirements as is done in most states where you have a certification requirement, and the teachers have to meet that. They do work very closely with the teacher training institutions on the expectations, and look at the training program, and maybe what the competency requirements are within that program. We do find teacher training institutions are working closer with us, with that standards commission, and with one another. It has been a very healthy relationship. It didn't happen overnight, by the way.

Mr. **Kildee**. In most states, including my State of Michigan—and there is some dispute about the validity of the test—an attorney or hoped to be attorney graduating from law school is asked after the fact, after graduation, to take an examination to see whether he or she is qualified to practice law in the state. That would be fine, if the test were a good test, a competency based test, and I am not always sure the bar examination is that good. It would seem to me if Oregon is committed to competency based education, that they should take a look at perhaps extending that to the teacher training institutions.

Dr. **Duncan**. As I said earlier, Mr. Kildee, the teacher training institutions are really getting very much involved in that whole area right now, and we hear a lot of talk going on, and we see some action going on. Probably one of our finest training institutions has moved in that particular direction. Others are looking to them as kind of the leader, so we do see something happening.

Of course, it gets down to we may produce someone who reads and writes well and can ansswer the textbook questions about child behavior and all of that, but when it gets down to actually dealing with people, that is going to be, that is always the true test, I guess.

Mr. **Miller** Mr. Buchanan?

Mr. **Buchanan**. No further questions, Mr. Chairman.

Mr. **Miller**. Just a couple more questions.

Did Oregon consider a competency test when you were putting togethr this program? You mentioned you had a lot of town hall meetings, and so forth. Was that considered as a vehicle?

Dr. **Duncan**. I said I had not been elected state superintendent at tht particular point. There was minor discussion, I know, in the area where I lived, and where I was superintendent. I don't recall any real state movement in that direction. The real change came about, I think that the state in its regular or regional planning did want to mandate the specific competencies that would be required in all schools, and they realized that there would be so much opposition to that concept that they did pull back, and I think that was a wise decision, because I am convinced that had they moved in that direction that there wuld have been just a wholesale effort to sabotage the whole program, because there as an effort to sabotage it even with the modifications involved.

Mr. **Miller**. Your program sounds at first impression certainly more enlightened than the idea of a copetency test. I see in California where I guess it is in the eleventh grade you can take one of these tests and if you pass it you can leave school. A tremendous number of students take the test, obviously expressing some desire to leave school, but 50 percent of them fail it, and I am a little concerned that there is much we can do for that student by holding them for one more year. So I am not sure that that is an answer in terms of upgrading education or the opportunities of the student.

Dr. Wiley, let me just ask a question.

Dr. DUNCAN. Mr. Chairman, may I respond just a minute? I really hate to leave here today with you thinking that the program is not without problems, and I don't know if all of the members did hear this. There was a movement, in fact, I believe there will be a joint resolution, passed in our Legislature to take a good look at whether we should abolish the program or move forward or modify or what.

In our own State Board of Education, who did develop the program, they will be reviewing the whole program during 1978. That was our plan. I a sure there will be modifications in that plan, and as I said, I think it's moving in the right direction. I would hope we could make some changes. I don't want to leave the impression that this is the model program that anyone should adopt.

Mr. MILLER. I understand that. I guess my statement is to suggest that given the level at which you are starting the competency program and the ivolvement that appears to be coming in the future at the elementary level, when you find these deficiencies in the education of young people, it appears you may have a chance to do something about them and that the competency exam at the eleventh grade or in the twelfth grade doesn't give us much of an opportunity to deal with the problems that that young person is going to face in exercising his options in our very complex society.

I think it's a little bit of a cop-out to suggest that that is the way to go, but I assume we will have witnesses to competency exams that will tell us either that is so or it's not so. We will leave that question to later. I just wondered if you had considered it, and if it had been rejected by the state why it had.

Dr. Wiley, you have spent a fair amount of time this morning talking about the diversity of education that is taking place at the high school level, and therefore, the test, while it appears to be accurate in measuring declines or advances in those areas that it measures, it also fails to measure, I would interpret your remarks, a significant area of education that students have been engaged in over those four or five years.

It simply is not set up to measure those. My question would be this diversification also seems to be taking place in the colleges and universities, and my question would be, therefore, is it fair to say that an example such as the SAT is a proper measurement of whether or not you can succeed in college, or whether you ought to be considered for enrollment in higher educatin?

Dr. WILEY. Let me read a very carefully phrased statement that I have in here. Then maybe we can move off from that.

Mr. KILDEE. Why don't you be careless a bit?

Dr. WILEY. Okay.

Mr. MILLER. We are experts in that, we understand careless statements.

Dr. WILEY. I think the question of what competencies ought to be required for college admission is a very serious and complex problem, and it's not solved by having a test like the SAT; it's not solved by having a test battery like the ACT test battery, and those are the two major college entrance examinations.

Let me just say these entrance examinations serve gathering functions, and they define who it is we are willing to allow to go on to positions of societal leadership, and they are very, very important decisions, and they are not technical decisions; they are political and public decisions about what we want our society to be, and what kinds of persons we want to lead it, and what kinds of persons we want to e barred from such leadership.

So I don't really care to comment on the technical accuracy of the SAT as a test, but I do believe that the problems are more than technical. I don't know whether that is responsive.

Mr. MILLER. It's too resposive. Based upon that response I ought not to be sitting here, given my SAT and LSAT scores. The test is a flop, let me tell you.

Dr. WILEY. I just think we need to set the kinds of goals we want to set and we need to look at the test very carefully when they serve critical functions and I don't think they have been looked at carefully.

Mr. MILLER. In all seriousness, it's an area of legitimate concern in that gathering function. Obviously it is a sieve to screen people out. The question is whether it accurately reflects the experience that they will be required to go through after they get through the gate. There is a lot of indication that there is a massive number of students who get through the gate somehow, with or without an acceptable score. I guess you can go to community colleges because in California, because you are 8, you have a right to go, and you can go that route.

There are other ways, and they are successful, and I assume building, although an awful lot of that time appears to be spent in remedial activity, but building upon what they have learned at the elementary and secondary level, so it is a legitimate question, therefore, in your mind as to its accuracy in terms of keeping people in or out.

Dr. WILEY. It is certainly; it's a legitimate question to ask whether a particularly commonly used or non-commonly used college entrance examination is a useful instrument for the purposes that we want it to perform.

That issue is a complex one, because it relates to gate keeping and it relates to the preparedness of children for that later educational experience.

Mr. MILLER. If I understand correctly, I remember when I was begging to get into law school with my test scores. My case was there is a whole group of applicants in the middle that the test doesn't properly predict what will happen to them. It fairly clearly predicts, I think, what will happen to those students who do very poorly on the LSAT, and to those students who do very well, and there is obviously some exchange. In the middle brackets, it doesn't necessarily do so. You have students moving up and down and back and forth in their success in law shcool and so forth.

So the students surrounding the gate, to use your analogy, there are some real questions as to whether they ought to be allowed to enter or not.

Dr. WILEY. Right. The problem is for many of these commonly used gatekeeping tests, it's very difficult to criticize them because there is not enough information available to really systematically analyze.

Mr. Miller. There appears to be enough information available at least in your studies of secondary education, as to the changes that are taking place in terms of diversity of opportunity and courses taken by students.

Dr. Wiley. Yes.

Mr. Miller. It would appear just from a layman's point of view, and again somebody can refute this, that that is also taking place at the higher educational levels, and yet you tell us we have a test that stands between that opportunity which measures very well that which it measures, but it is measuring some values that perhaps society does not hold as dear as they once did, or, in fact, the student no longer has the opportunity to take part in.

Dr. Wiley. You are expressing concerns that I share. I am greatly concerned about test content at all levels, and I think that is one very critical level which does a filtering and sifting, and we have to be very concerned about the consequences of that filtering and sifting, therefore, the kinds of children who are allowed to take part in certain experiences. I would agree with the concern. I think, in fact, I would have done something in that area if the iformation were available. The problem is that test content of college entrance examination tests are very carefully guarded, and so it's very difficult to do content analysis, which relate to the kinds of skills that are actually being tested.

Of course, people have different attitudes towards such tests. ETS, for example, treats the SAT as an apptitude test, and therefore, treats it as a homogeneous phenomenon, and it is very difficult, for example, for other people who have other prospectives on the test to do analysis which might indicate what their social functions and consequences are.

Mr. Miller. Is it also possible that the test is a statement or fact, if you will, in our elementary and secondary education? Why would a student who completed 12 years of education with a B average have to take a test?

Dr. Wiley. I don't know whether the College Board regards their test as a statement or not. I guess I can't respond to that.

Mr. Miller. To see if you can write a check and fill out a rental agreement.

Mr. Kildee?

Mr. Kildee. No questions.

Mr. Miller. Jack?

Mr. Jennings. I have two questions of Dr. Forbes.

I noticed in your background materials you state that in the Southeast the national assessment has shown that the gap between black and white nine years old has narrowed very greatly with blacks gaining 7.7 percentage points from 1971 to 1975. That has to do with reading scores. With science scores, you state that in a study of the regional patterns of science achievement for students of ages 9, 13 and 17, the national assessment found between 1970 and 1973 declines in science achievement were smaller in the Southeast, an area which was undergoing major desegregation compared with the rest of the country.

During that period, science achievement in the South did not decline as much as it did in the rest of the Nation. In fact, the science knowledge of black students in elementary school, age nine, actually, improved.

You seem to imply that part of the reason why the scores in the South have not declined as much as in other parts of the country, and why they have increased in fact for black students in the South, has to do with desegregation. Would you care to expand upon that, and could you tell us whether there has been any analysis of these scores to see whether the scores of black students in integrated schools in the South have increased greater than scores of black students in schools in the South which are basically segregated?

Dr. FORBES. We were very interested in the science data because it did span the period of time that integration did occur in the southern part of the country, so we went back and looked at the change in the racial composition of the schools and also the achievement of students attending those schools, and since our data, our survey, is not set up to be able to draw cause-effect relationships, we did report the two, the increase in achievement at the time that this racial integration was occurring.

We can't definitely say that that contributed to it or caused it. However, we did go and look at other possible reasons, such as migration. It had been suggested it might just be a shifting of students, so we checked that out. We found that that could have caused or could have been the cause for a small amount of that change, but nowhere near the amount of change that occurred. So kind of the bottom line is we can't say that the integration in the Southeast caused this rather dramatic increase for the black elementary students, but we thought that all of the descriptive information should be provided.

I think one thing it does do is to show that integration did not cause the decline in either the white or black student achievement in that area.

Mr. JENNINGS. My second question has to do again with your background materials. You state in these background materials regarding reading that nationwide, 17 year old students have improved in basic reading skills needed to function in today's world. However, among these same 17 year olds, over 21 percent of the students from the disadvantaged urban areas of the country, nearly 42 percent of the students who are black, and 20 percent of the students from the Southeast are still functionally illiterate.

You also state regarding mathematics scores, that young people from the lower socio-economic area performed 10 to 16 percentage points below the national level. Those from affluent areas are from 6 to 8 percentage points above the national level. That would seem to leave the impression that the needs of those at the lower economic levels in the country are still very great, and have to be addressed in Federal educational programs.

Also, all of you seem to say that the efforts in elementary schools in early grades seem to be sustaining the basic skill achievement in those early grades. Now, both of these groups are foci of Federal aid, principally in Title I. Title I funds are concentrated on the lower economic groups and they are also concentrated almost exclusively on the lower elementary grades. For that reason, I find it a little bit hard to understand the statement in your prepared testimony which says that the special needs of students from low economic areas, et cetera, are well documented, but apparently the Nation's effort to provide equal educational opportunities has not yet resulted in equal educational benefits for all of our country's students.

Are you saying that the Federal programs have not achieved results or are you saying instead that the Federal programs may have achieved results and they may be rightfully focused, but maybe there is something else that has to be done about other programs and other efforts.

Dr. **Forbes**. More the latter, because I think if you look at the total statement, we tried to point out the closing of the gaps that have occurred, especially at the nine year old level, so that was to suggest that maybe one of the reasons would be the Federal expenditure. We have tried to go back and take a look at our reading data, and if the schools where we were collecting data were eligible for title I money or not.

We come up with some preliminary results, but because of the softness of the data we thought it might be misleading to have reported it. There is nothing in our research to idicate that the Federal programs are not succeeding.

The statement is based on some strong feelings I have, that as long as we can collect data and predict that blacks or that children from low income areas are going to perform worse than other people, then I don't think we can say we are providing everybody with equal educational benefits. It wasn't to sugggest that the programs aren't the right direction, they aren't being successful, but was only to point out we still have a long ways to go.

Mr. **Jennings**. Thank you.

Mr. **Miller**. Dr. Duncan, I want to ask a question.

Again, I go back to this question of the diversification of curriculum. As I understand the Oregon competency program, because a student chooses to move off into career development or work study, which may be the same thing, or any of the other elective courses, they wouldn't necessarily, therefore, simply drop out of sort of the academic, I don't know how to put this, but it's suggested that somehow, and correct me, Dr. Wiley, it's been suggested that diversification somehow has taken away from the reenforcement of the skills, and/or an expansion of the skills into a more complex writing, more complex reading ability, and so forth, that the diversification may have an impact on this.

As I understand the Oregon program, there is a cross-checking, so that if you are out in metal shop, you are still required to perform some fundamental skills regarding your proficiency in math, perhaps, or in reading and so forth.

Is that correct?

Dr. **Duncan**. That is right. That is the cross-check right there. As a matter of fact, if you were to check our vocational programs, in school districts where they really have started to implement the requirements and the cross-check system, you would find the vocational people are very much involved with the minimum competency program, because, in fact, I would imagine many of our school districts have listed that as one of the subject fields where you would be cross-checking again, because as I said, by 1978 you have to cross-check in three sub-areas , and by 1981 you have to add another three, and eventually the cross-check would go right on down and pick up all subjects.

Mr. **Miller**. I am glad to hear that, because I am a little concerned we are starting to pour a fantastic amount of money, although in terms of national scale I guess it's not that much, but for the Federal Government into career education, and I read the statement here by Dr. Forbes in his assessment of career development that one-third of the adults and more than half of the 17 year olds had difficulty in writing a job application and figuring finance charges, so I would hope as they move off into these other areas that there is some kind of cross-check to make sure that they have that kind of proficiency.

Dr. **Duncan** One of my real concerns, Mr. Chairman, when I arrived on the scene about two years ago, the vocational people—I am just thinking within our own department—the vocational people sort of were doing their thing with career education and vocational education and basic education staff members were going off in their directions. The basic education people were rather resentful toward the vocational career education people because that seemed to be where the money was at that particular point, and we had a real priority emphasis on the career vocational education, and we have really tried to bring about a working relationship even within our own staff, which is very interesting now to see the career and vocational education people working very carefully with the basic education people to try to pull this whole concept together.

I would say we are really doing very well in that area. While we have our weaknesses, that is probably one of our strengths right now with vocational education.

I do feel sorry for states where there is a split, vocational education is a separate agency off doing its thing, and the basic education off doing its thing. I think that creates a lot of problems in some States. Thank goodness we don't have that.

Mr. **Miller**. I want to thank all of you for your testimony, unless you have some statements you would like to make.

I think you are dealing with a most complex problem, and it's one that certainly we as elected officials have to deal with in some way. I strongly believe in the constituency I represent that education and the problems attendant thereto, whether it's financing or proficiency, it's the single greatest concern of my constituents, after you remove the headline of the week, whether it's oil or foreign relations or what have you, after you take that one away, the next question that continues to come up is education, and what is happening to their children in that system.

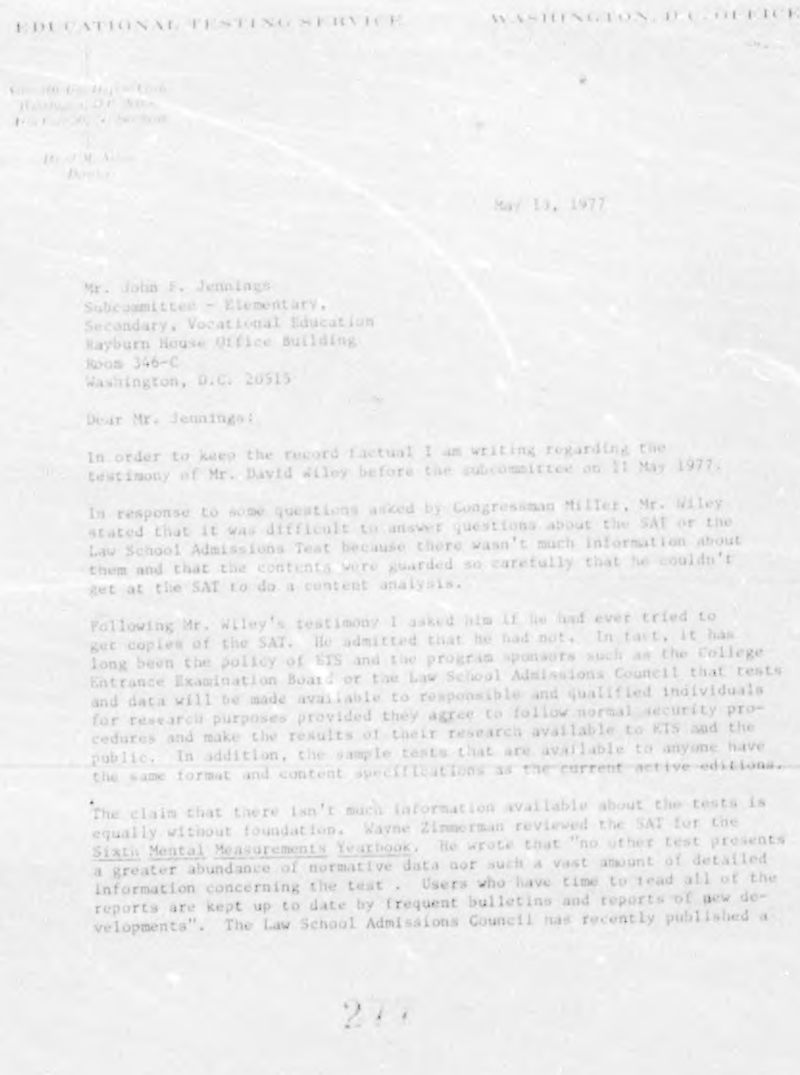
So I want to thank you for your contribution because hopefully you have given us some basis on which if we are to respond at this level, and I am not sure that we ought to be responding, but if we are, perhaps we can respond in some kind of proper fashion rather than some kind of politically expedient fashion that takes care of our immediate problems.

The subcommittee will adjourn until May 24, at which time we will conduct hearings on the paperwork problems of local school districts, which I think will also have some rather significant things to tell us, probably in a little louder voice than you have told us today.

Thank you very much.

[Whereupon, the subcommittee adjourned at 11:15 a.m.]

[Material for inclusion in the record follows.]



EDUCATIONAL TESTING SERVICE   WASHINGTON, D.C. OFFICE

May 13, 1977

Mr. John F. Jennings
Subcommittee - Elementary,
Secondary, Vocational Education
Rayburn House Office Building
Room 346-C
Washington, D.C. 20515

Dear Mr. Jennings:

In order to keep the record factual I am writing regarding the testimony of Mr. David Wiley before the subcommittee on 11 May 1977.

In response to some questions asked by Congressman Miller, Mr. Wiley stated that it was difficult to answer questions about the SAT or the Law School Admissions Test because there wasn't much information about them and that the contents were guarded so carefully that he couldn't get at the SAT to do a content analysis.

Following Mr. Wiley's testimony I asked him if he had ever tried to get copies of the SAT. He admitted that he had not. In fact, it has long been the policy of ETS and the program sponsors such as the College Entrance Examination Board or the Law School Admissions Council that tests and data will be made available to responsible and qualified individuals for research purposes provided they agree to follow normal security procedures and make the results of their research available to ETS and the public. In addition, the sample tests that are available to anyone have the same format and content specifications as the current active editions.

The claim that there isn't much information available about the tests is equally without foundation. Wayne Zimmerman reviewed the SAT for the Sixth Mental Measurements Yearbook. He wrote that "no other test presents a greater abundance of normative data nor such a vast amount of detailed information concerning the test . Users who have time to read all of the reports are kept up to date by frequent bulletins and reports of new developments". The Law School Admissions Council has recently published a report of research done on the LSAT and law school admissions. The report covers a time span from 1949 to the present. It is contained in two bound volumes and one loose leaf binder containing the most recent work. The two bound volumes are respectively 564 and 766 pages in length. To say that little information is available on the SAT and LSAT is simply without basis.

I would appreciate it if you would make the above remarks part of the record. Thank you.

Sincerely,

David M. Nolan
Director
Washington Office

DMN/jf

APPENDIX

APPENDIX 1

A PRELIMINARY ANALYSIS OF

DEMOGRAPHIC TRENDS INFLUENCING THE ELEMENTARY AND SECONDARY SCHOOL SYSTEM

UNITED STATES CONGRESS
OFFICE OF TECHNOLOGY ASSESSMENT

MAY 1977

PREFACE

Representative Carl D. Perkins, Chairman of the House Committee on Education and Labor, in a letter of March 17, 1977 (appended) requested OTA assistance for the Subcommittee on Elementary, Secondary and Vocational Education through the preparation of a paper on demographic trends in relation to elementary and secondary education.

The Chairman requested that OTA "...submit a report including... findings and supportive data to the Subcommittee by the third week of April. It is my hope that the Subcommittee might be able to use this paper as the basis for foresight hearings on demographic trends in elementary and secondary education." This request was a follow-through to a preliminary planning paper, which consisted of an inventory of issues and trends in relation to elementary and secondary education with two brief cases illustrating how trends and issues can interact in a policy interesting way. One of the examples concerned demographic influences on elementary and secondary education. In order to put something useful into the hands of the Committee to help determine whether a full assessment by OTA could be usefully devoted to the subject, an exploratory task was conducted resulting in this further document. It is an expansion and extension of the previous preliminary paper mentioned above, "Trends and Issues Influencing Elementary and Secondary Education," dated December 29, 1976.

In order to proceed with this activity, an interagency supporting task force was organized with representatives from the Bureau of the Census, the U. S. Department of Agriculture, the National Institute of Education, and the National Center for Education Statistics. The task force was to assist OTA in the collection and organization of information and data for this exploratory task.

The second major element in meeting the objective was a two-day planning workshop. It involved members of the interagency task force as well as external specialists in demography and elementary and secondary education, and user representatives. Potentially impacted parties were also invited to participate. A House Committee staff member and a staff member from the Senate Subcommittee on Education, Art, and Humanities participated in a portion of the workshop. Specifically, the workshop was designed to identify:

- Significant trends
- Extant demographic data and projection
- New trend data and information needed
- Factors interacting with or changing trends
- Implications of the demographic trends for:
  - a) The Committee
  - b) Federal Agencies
  - c) State and Local Agencies
- Policy issues

As a conceptual framework around which the workshop, task force and paper are constructed, a time perspective of twenty years, plus or minus ten years, was assumed.

To improve the diversity of inputs and the clarification of the priorities and significance among trends, the previous document mentioned above was circulated to the task force, workshop participants, and a substantial number of other interested and informed parties for review and comment.

Since this paper is intended to assist in the implementation of the foresight provision, a note of explanation is in order. The foresight provision is a rule adopted by the House of Representatives which directs each House Committee to do futures analysis, beginning in 1975. Rule X, section 2 (b) (1) of the House rules, states that each committee, except Budget and Appropriations, "...shall review and study any conditions or circumstances which may indicate the necessity or desirability of enacting new or additional legislation within the jurisdiction of that committee (whether or not any bill or resolution has been introduced with respect thereto), and shall on a continuing basis undertake futures research and forecasting on matters within the jurisdiction of that committee."

Therefore, this paper is a summary and digest of principal demographic trends influencing elementary and secondary education. While the analysis, in view of the limitation in time, cannot claim to be exhaustive, we do believe it provides a sound, reliable and comprehensive base for further probing of the demographic factors, through a hearing mechanism, through directed agency studies, or through the reaction of state and other affected parties.

The results of this exploratory task in response to Chairman Perkins' request suggest that the Subcommittee hold hearings to address the matters raised in this paper before determining whether a full assessment by OTA shall be requested.

OTA WORKSHOP ON

DEMOGRAPHIC TRENDS INFLUENCING THE ELEMENTARY AND SECONDARY SCHOOL SYSTEM

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APPENDIX A: Letter of Request

I. INTRODUCTION

This paper was prepared in response to a request from the House Committee on Education and Labor for assistance in the 95th Congress in the exercise of the foresight provision with regard to its consideration of the Elementary and Secondary School Act (ESEA).

At the request of the Committee Chairmar, this paper specifically focuses on demographic trends. Its purposes are (1) to provide the Committee with an alert or early warning on the policy implications of changes in the structure of the population, and (2) to assist in the identification of some problems and issues growing out of those demographic trends.

In pursuit of this task, a nominal time frame of ten to thirty years has been assumed. As will be apparent in the details below, the ability to firmly define trends over that interval and to relate the trends to policies is hardly uniform. The forecasts are far more ragged than is suggested by the nominal time interval of interest.

The primary objective of this paper is the identification and clarification of trends. Therefore, major emphasis is on the trends themselves with preliminary emphasis on policy implications. Some interpretation of the trends is in order, to relate them to the Committee's interests. But in view of the request, as well as the constraints in time and labor, no effort has been made to probe all of the policy implications in depth against a background of current and proposed legislative, regulatory, and funding activities at the Federal and state levels.

As a further constraint, those items which the Subcommittee is likely to be considering as part of its regular review of ESEA and which are being given attention by the sister agencies in the Congressional family--CRS, GAO, and CBO, are not emphasized.

A. What is Demography?

Demography is a branch of the social sciences dealing with the determinants and consequences of population change. It treats vital and social statistics, such as birth, death, marriage, and disease rates, and the size, density, distribution and mobility of populations.

Much of the future change is built into present age distributions and the age specific birth and death rates that prevail now and in the coming years. The age composition of the population is in continuous flux as can be seen from Figure 1. Even in the

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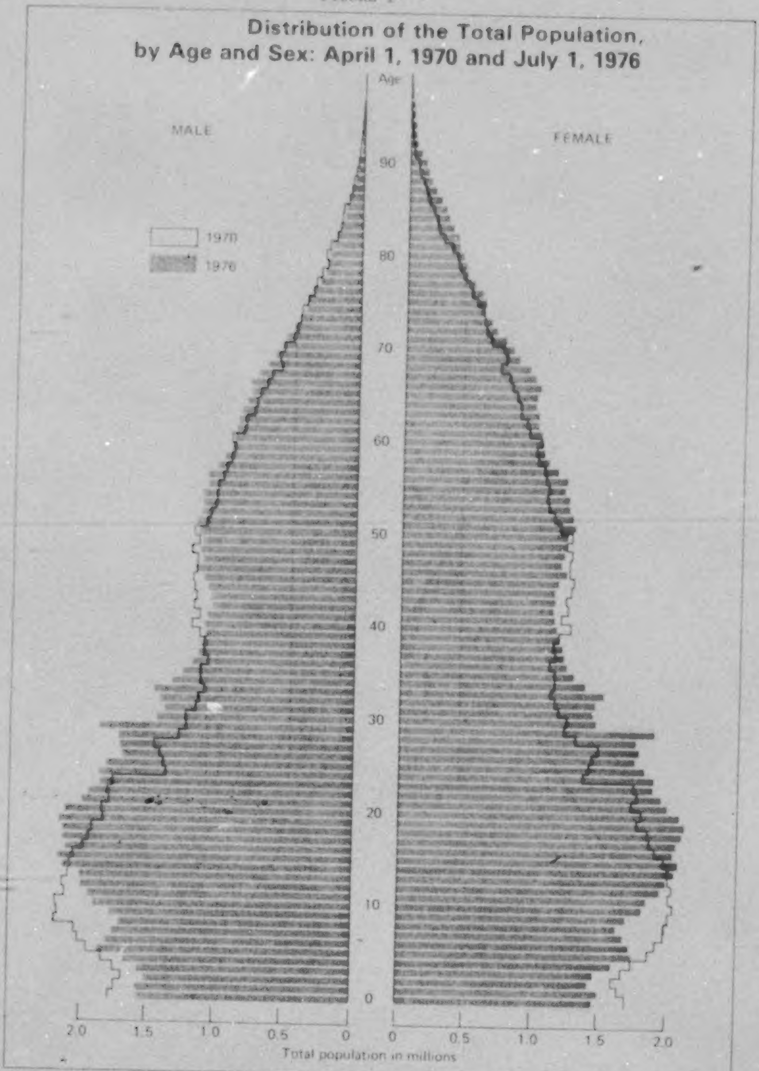
FIGURE 1*



Distribution of the Total Population, by Age and Sex: April 1, 1970 and July 1, 1976

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*References and notes are cited by Section and are collected at the end of the paper.

interval from 1970 to 1976, there are noticeable shifts in age distribution, particularly in the large numbers of "baby boom" children. As the post World War II baby boom cohort (age group) moves through society, i.e., as it ages, it will create waves of effects as each new cohort of the age distribution swells and, subsequently, contracts. The principal determinants of future population patterns will be age specific birth rates or fertility rates and to a lesser extent immigration patterns. Death rates have not changed appreciably in decades, nor are they likely to.

A summary view of the major shifts in the numbers of people in varying ages from now to 1995 may be seen in Figure 2. Projection Series II is today's "best guess" forecast.

The present and the past are decreasingly satisfactory models for the future, particularly for the future of the educational system which is undergoing major change. Planners and policymakers, therefore, need a substantive basis for understanding change. Demography is one such basis. It has the advantage of being quantitative and structural with regard to the organization of society, and quite reliable in its ability to forecast, from a policy point of view, over interesting intervals of time.

B. The Organization of the Paper

Immediately following is a summary of the highlights of the study. The next sections treat the individual demographic trends in some detail.

FIGURE 2
Projected Sizes of Functional Age Groups[2]

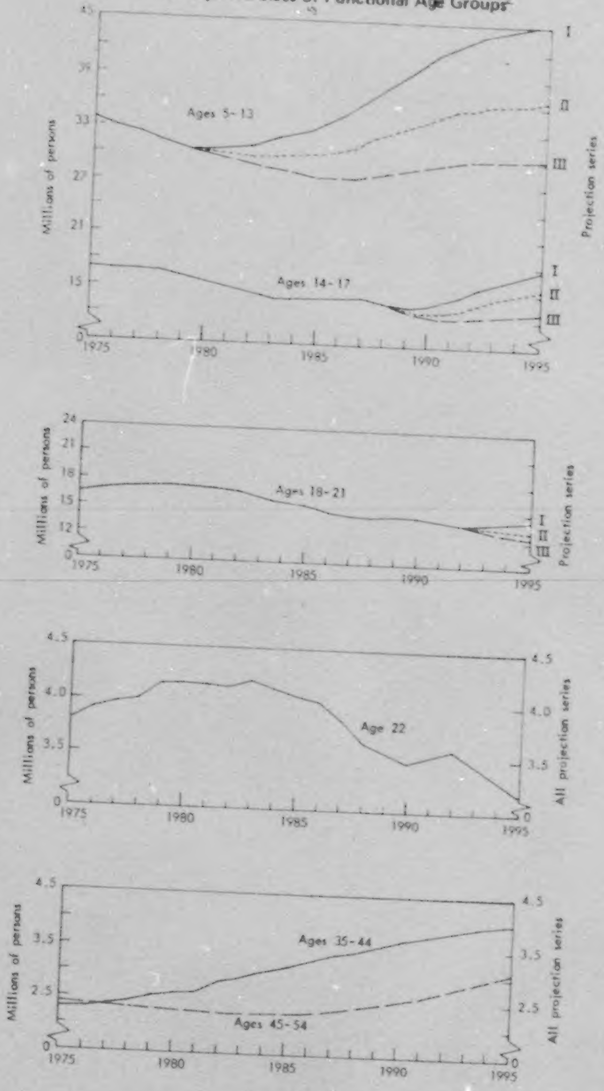

Table 1 outlines the principal demographic categories considered in this paper.[3] Some attempt is made to organize material in cross-cutting categories, such as the demography of the decline in school enrollment and the demography of schools, since these categories highlight the principal policy implications. While the focus of the paper is demographic, there are some trends of a non-demographic sort which are likely to have strong interaction with the demographic trends. These include energy availability, economic growth, civil rights movements, birth control and abortion technology, and changes in work schedules. Some of these non-demographic trends are outlined in Table 2.

To help identify where the demographic trends will impact the elementary and secondary school system, a working list of elements of the elementary and secondary school system has been prepared--Table 3. This Table is referred to throughout the text to develop the discussion of trends and to check for salient points of impact.

TABLE 1

DEMOGRAPHIC TREND CATEGORIES POSSIBLY INFLUENCING ELEMENTARY AND SECONDARY SCHOOL EDUCATION

1. Birth and Fertility Rates

2. The Family

   o Marriage/Divorce/Separation/Remarriage Rates
   o Household Size, and Rates of Formation
   o Female-Headed Households

3. Women's Entry Into Work Force Full and Part-time

   o Working Women
   o Working Wives

4. Occupational Structure

5. Internal Migration

   o Metropolitan-Nonmetropolitan
   o Black/Hispanic/White
   o Poor/Working Class/Middle Class
   o The Growth of the Sunbelt

6. Residence

   o Rural/Urban
   o Big City-Small City
   o North-South
   o Suburban-City

7. Income

   o Regional Income Patterns
   o Rising Incomes
   o Dual Income Families

8. Special Populations

   o Blacks
   o Hispanic: Mexican and Puerto Rican
   o Other Ethnic Groups

9. Immigration from Foreign Countries

10. Youth Employment

11. Educational Level

    o School Attendance: Public; Private; Parochial
    o Dropouts
    o ADC Mothers

12. Puberty

TABLE 2

NON-DEMOGRAPHIC TREND CATEGORIES LIKELY TO INTERACT WITH DEMOGRAPHIC TRENDS

*1. Changes in Rate of Economic Growth

*2. Energy Availability

*3. Civil Rights Movements

*4. Expansion and Specialization of Human Services Occupations

*5. Birth Control and Abortion Technology

*6. Flextime and Alternative Work Schedules

7. TV and Other Media

8. Government Intervention

9. Welfare Demand and Supply

10. Attitude Toward Work

11. Intergenerational Changes

Grandparent Child
Rural/Urban
Illiterate/Literate
Noneducated/Schooled
Foreign Born/Native
Farm/Blue Collar/White Collar

12. Shifting Public Goals, Desires, Expectations

13. Demonstrations/Activism

14. Increasing Complexity of Society

15. Accelerating Change in All Sectors

16. Sub-trends in Urban Areas

- Secularization of Attitudes
- Anonymity/Impersonality
- Separation of Work/Residence
- Travel
- Age Segregation

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*Asterisked items are particularly likely to strongly interact with demographic trends.

TABLE 3

ELEMENTS OF ELEMENTARY/SECONDARY SCHOOL SYSTEMS

- Goals
- Students
    - Number
    - Kind
    - Distribution
    - Performance (Test Scores)
    - Equity/Access
    - Self Development
    - Segregation
    - Busing
    - Legal Status, Rights
- Structure - Management, Staff
- Finance
- Content - Curriculum
- Teachers
    - Production
    - Distribution
    - Requirements
    - Reserves
    - Retraining
- Teaching Resources
- Facilities
    - Size
    - Location
    - Consolidation
    - New Roles
    - Design
- Quality Control
    - Accountability
- Community Role
- Planning
- R&D
- Other Goals

o Private/Parochial vs. Public School
o Legal Questions

C. Summary Observations

1. School Age Populations

The size and distribution of the U.S. population are the results of past birth, death and migration rates. Since the death rate is not expected to change and since immigration has been semi-controlled at a set level, it is possible to project with very high accuracy the future size of cohorts (age groups) of persons already born. Furthermore, since the fertility rate is not likely to undergo any large excursions in the short run, i.e., over the next three to five years, one can make further extrapolations of elementary and high school populations with high reliability. For example, one can say with great certitude that the size of the high school population of 1990 will be about 25 percent smaller than in 1975.

Judging from the "best guess" forecasts, recent declines in elmentary school children are likely to continue through mid-1980's. Thereafter, the number of school children will rise, leveling off about 1990 to present levels.

For the nation as a whole, reliable predictions can be made about the total number of children entering the elementary school system through the mid-1980's and entering the high school system through the early 1990's.

2. Local Impacts

The steady decline in school populations, while predictable at the national level, may have little bearing on the situation faced by state and local planners since the details of internal mobility and migration and the special needs of subpopulations create local or regional shifts within the school system which may exaggerate or counter the general downward trends for the nation. The dominant policy actions are at the city, metropolitan, district, state and regional level.

3. Inadequate Local Capabilities

Demographic analysis capabilities are inadequate at the state and local level for understanding and dealing with the major demographic trends. Limitation of data restrict demographic analysis and especially forecasting at the state and local level.

4. Decline Is Too Simple a Concept

Shifting school populations, local growth and local decline are more appropriate planning concepts.

While there may be an overall surplus of schools in many areas of the country one can still anticipate shortages of facilities and teachers and the need for training, particularly in those areas which are upgrading their schools as a result of greater resources, new population, judicial and legislative mandates.

5. The Data Base

The data base being generated by the Federal government (in terms of surveys, censuses, demonstrations, research, and the presentation of policy focused information on demography) falls short of the national, state and local needs.

6. Major Demographic Factors

The dominant demographic influences impinging on elementary and secondary school education are:

a. Birth and fertility rates.

b. The rates of family formation and dissolution, particularly the rates of household formation and the rapidly growing number of female-headed households. These shape the millieu of which the school is an important complement within which children are socialized.

Approximately 45 percent of children born in 1976 will have lived with a single parent for some time before they reach 18 years of age.

The proportion of children living with both parents declined from 88 percent in 1960, to 83 percent in 1970, and reached 80 percent in 1976.

The growth of female-headed families with children has increased by over 250 percent since 1950. Further, such families comprise 41 percent of all poverty level families.

Single-parent families are almost always in relative if not absolute poverty. Limited income will create new demands and stresses as well as the need, if not the pressure, for compensatory public services.

c. Women's entry into the work force will affect every aspect of elementary and secondary school education by creating more curriculum demands and new service demands, such as day care services for children and replacement for previously volunteered services.

d. Local mobility and internal migration are perhaps the two most important factors in producing state, regional and local deviations from other large scale national demographic trends. Movements between cities and suburbs, and between metropolitan and nonmetropolitan areas, as well as internal migration of subpopulations, such as Blacks, Hispanics, and middle and working class families of all races, are major complicating demographic factors in elementary and secondary education planning.

e. The growth of the so-called sunbelt will create local imbalances, local growth, and demand for new facilities. At the same time, it will promote further income equalization among regions.

f. Boom towns are likely to have a major impact on local school systems in Kentucky, southern Illinois and several western states as fossil fuel resource development proceeds.

g. Immigration now accounts for roughly 25 percent of national population growth and should be a continuing source of distress to the school system, especially in metropolitan areas:
In 1975, of the 386,194 legal immigrants, 34% were located in the ten largest U.S. metropolitan areas and 45% were located in cities with a population greater than one million.

h. The partitioning of populations between public and private schools, particularly the movement of the middle-class school populations into private schools, may be gradually creating a slow building but major crises for the viability of a democratic, egalitarian school system in our biggest cities. The net result could be not just ghetto schools but ghetto school systems.

7. Puberty

The age of the onset of adolescence--which has been steadily declining at the rate of four months per decade since 1830 may now have levelled off.

The junior high school has never adequately come to grips with the onset of puberty in terms of curricula, services or goals. Especially critical is the increasing rate of early sexual activity among boys and girls of junior high school and high school age, creating both immediate and long-term social and educational problems and needs associated with adolescent childbearing. The only age group in the United States now undergoing significant expansion in birth rates are females under age 15.

8. Responses to Decline

In the face of declining enrollments and increasingly underutilized or overcapitalized facilities, school administrators are faced with three major alternatives:

- to contract, that is, reduce the number, size or staffing of facilities
- to seek new clientele
- to expand services to the current available clienteles

Each of these options is being exercised. The most significant implications for education are in the expansion to new clienteles and the extension of services for present clienteles. At the high school level new services to adults include continuing education, certification of high school graduation or other credentials, recreational and hobby needs, career facilitation, and skill training of direct economic benefit, such as auto and home repair.

The key new market for the elementary and junior high school systems may be the further extension into nursery school and day care services and the forward extension to provide longer time attention to the child during the day (from 3:30 to 6:00 p.m.). Both markets reflect the needs of working mothers.

9. Big Cities and Small Communities Are Hardest Hit by Decline

In the period of 1968 to 1974, big city school systems increased by an average of 95 percent in minority student enrollment. As of 1974, the average student minority enrollment was 67.1 percent.

The 27 largest cities in the country peaked in their total school enrollment in 1970-71 at 5.4 million. In 1975-76 enrollment declined to the level of 1962-63.

10. Resegregation

The 187 largest school districts provide schooling for some 27.3 percent of all school children. For those dissatisfied with the urban school systems, there are several options:

- o family migration to suburbs or to other areas
- o the withdrawal of the child from the public school system into the private school system
- o early graduation
- o removal from the school and graduation by certification
- o tracking

The sum of all these processes is resegregation. The reasons for dissatisfaction with schools as reflected in demographic trends are not well enough understood. The relative importance of racism; concern about the quality of schools; concern about deportment and behavior in schools; classroom-subject content, such as sex education; residential concerns, such as the quality of the neighborhood and crime and more subtle demographic factors such as steady rate of removal and dropped rate of population replacement, merit further attention as problems which must be dealt with to bolster the viability of major urban school systems.

11. Bilingual Education

The relationships between immigration, foreign language, and educational success give high priority to questions of role, function, and style of bilingual education--what it accomplishes, and what the opportunity costs are, i.e., what the student does not get at the price of bilingual teaching.

If the bilingual education of students whose primary language is not English, particularly in big cities, overstresses the system so that the job is done badly, the level of education of English-speaking students may also be reduced, futher accelerating the decline of the urban school systems.

The continued immigration of foreign-born students will renew the kinds of cross cultural stresses associated with students who are hard to acculturate. This often results in delinquency and poor school performance, particularly for urban school systems.

Changing the status of new, illegal immigrants might have an effect on school systems by promoting marriage and family formation, and thus result in a higher rate of entry of children into the school system. This will especially affect big city systems and the smaller communities in the Southwest and in California.

12. State and Local Needs

A significant opportunity to stimulate state and local officials to integrate demographic data into educational planning exists. There is a place for nationally generated projections of state and local populations and more timely consideration of the enrollment shifts of which they give early warnings. There is also a useful role for state and more locally generated population projections. Demography, as applied at the local level, necessitates an element of judgment. Familiarity with local circumstances can play a major part in whether a given forecast is policy useful or policy irrelevant. In general, there is not enough expertise now at the state and local levels to meet this need.

13. Upswing In The 1980's

There is likely to be an upswing in school populations in the mid-1980's. This should result from a second wave-effect of the post-WWII baby boom children who, in turn, are bearing their own children now. There are several strategies available for accommodating that small rise, particularly in terms of teacher supply. First is the preparation of teachers through the normal supply channels of teacher education. Second, and more attractive from a public policy point of view, may be certification of recent graduates from other areas or the certification of those trained in teaching who have either long since dropped out of teaching or never employed their skills. The key question is how to insure flexible entry when the need arises.

In any case, there is sufficient lead time, (five years between an upsurge in births and entry into the elementary school system), to allow for effective planning. The more crucial planning problem is in the reverse direction, namely, managing the overall declining and shifting demand for school teachers.

14. Decline Is Not Universal

Extension, expansion, and growth is occuring in the so-called sunbelt, which in fact is an area covering much of the South, Southwest, and Rocky Mountain States: With regard to growth areas, it should be noted that:

a. Some 95 percent of persons moving from metropolitan to non-metropolitan areas are white. One may, however, anticipate as with previous social experience that non-white groups will catch up.

b. The movement of urban populations into rural areas is likely to create several stresses on present rural education systems. One example is a higher demand for educational amenities to which the urban dweller is accustomed.

c. Since any upsurge of population is likely to find its initial growth in the kindergarten and lower grades, it would be timely to consider flexible physical plant design and school location in growth areas, so that the new school population (as it moves through the local school system) can be accommodated without crisis.

d. Since 60-80 percent of school expenditures are salaries, the most common action in response to declining enrollments has been the elimination of teaching positions. Attention should, therefore, be directed towards mitigating the shock of across-the-board teacher lay-offs through ordered early retirement, retraining, recertification, and so on. It should also be noted that accompanying a decline in the demand for school teachers will, undoubtedly, be a movement toward increased credentialism which may have an adverse effect on the quality, vitality, and age distribution of teachers.

D. Some Policy Action Implications of Demographic Trends

The highest payoff actions meeting the clearest needs are those involving the generation and distribution of knowledge about demographic trends to relevant state and local government planners. This generation and distribution could flow out of research, monitoring, surveys, data gathering, and to some extent from demonstrations. Familiarity with local circumstances can play a major part in whether a given forecast is policy useful or policy irrelevant. In general, there is not enough expertise now at the state and local levels to meet this need.

The second major action area, therefore, is building capacity at the state and local level for more effective and timely planning in response to unfolding demographic trends. Building analytical capabilities and an information base focused on more fine-grain, detailed, and local analysis is needed.

Some of the detailed actions which seem to be practical and effective in dealing with the situation are listed below:

1. Generation and Delivery of Knowledge and Information

   A main limitation on more effective Federal, and particularly, state and local level planning is the dearth of adequate, focused and timely information. A number of specific measures could greatly improve this situation.

- The monitoring of specific population trends and the presentation of that information in a more educational issue-oriented mode dealing with birth, fertility, internal migration, immigration and demographic data is one key to better planning.
- The Census Bureau's state level projections are about ten years old. There is substantial opportunity in 1980 to generate and present more salient data. There is the further opportunity to modify the content of the data collection for the 1985 census.
- It may be worthwhile to innovate in terms of census collection, by going to much more sophisticated sampling techniques in which just a tiny fraction of the total population is sampled in depth, by carefully selected modes to give highly reliable data. Obtaining local estimates for small areas or sparsely populated areas would present special technical problems, using sampling techniques.
- The collection of appropriate, timely data on adult needs and activities is of primary importance in setting policy at local levels. Backing up better understanding of this potential market could be a series of demonstration and study projects to test and identify effective community adult education delivery systems.
- Assuming that extended day care, nursery care, and after school services are other plausible avenues for

expansion, data are insufficient on the needs of that clientele, the criteria for selection, kinds of services appropriate at different direct or indirect costs, and criteria and constraints on the user, usually the working mother.

- Paralleling this is the pressing need for more salient research on the effects of alternative caring systems on children as a function of their age, the socio-economic status of their family, the number of adults in the household, cultural background, and so so forth.
- Information needs to be directed at the parents and citizens outside the school system on how to set up, run and select nursery and day care programs.
- The information base is quite inadequate with regard to the influence of a number of demographic factors on the school child and, hence, on curriculum, service, and scheduling needs of schools. These include factors such as being a member of a single parent family, or a migrant or immigrant family. These merit more intense research and evaluation.
- Specific detailed case examples of satisfactory and unsatisfactory responses of school districts of different sorts--urban, rural, large community, or small community could be developed through short-term, highly focused

research, appropriately packaged and delivered to state and local planning officials, and other interested parties.

- Along that same line, extensive funds are not being expended on developing demographic data for energy, transportation, urban planning, and so on. A review of the applicability of these data bases to education planning is appropriate since marginal expenditure may yield substantial benefits.
- Population models and "how to do it" packages, useable at varying levels of government, could be developed, demonstrated, and disseminated by Federal agencies as a very useful complement to the program suggested above.
- It would be useful if one of the key Federal agencies concerned with population and education could organize demographic conference focused on the state of the art at the state and local level. From this, one could determine explicit, positive measures that could be taken in the long and short-run to enhance the capability to use demographic information for educational policy planning.
- Much of the suggested work in this area could be accommodated by the Bureau of the Census expansion of the proposed monthly state-by-state survey and economic

surveys. Other projects would usefully fit in with the developing programs at the National Institute of Education.

2. Building State and Local Capacity

The steady decline in school populations, while predictable at the national level, may have little bearing on the situation faced by particular state and local planners, since the details of internal mobility and migration and the special needs of subpopulations create local or regional shifts within the school system which may exaggerate or counter the general downward trends for the nation. The dominant policy actions are at the city, metropolitan, district, state, and regional level.

- Demographic analysis capabilities are inadequate at the state and local level for understanding and dealing with the major demographic trends. Limitations of data restrict demographic analysis and, especially, forecasting at the state and local level.
- The promotion of the organization of policy-focused demographic data at the state level is crucial. The general extension of state demographic services to local governments is highly desirable. One possible model would involve the creation of some centralized agency for demographic services at the state level to supply basic data and to collate individual forecasts made at the local levels.

- In some areas of the country, where relatively sparsely populated but economically integrated land units overlap state boundaries, the promotion of such activities on a regional multi-state basis would be useful.

In summary, the principal Federal actions appropo of demographic trends are: first, to stimulate the state, local, and regional capacity to use such data in their planning; and secondly, to marshal Federal resources to provide a better information and knowledge base for such projections.

II. DEMOGRAPHIC TRENDS

This and the following Sections present the basic information on demographic trends displayed in Table I which are likely to influence elementary and secondary school education. The trends considered are, first, those basic to the production of children--birth and fertility rates. Next, there is a discussion of the family, women's changing participation in the work force, and some general considerations of occupational structure, internal migration and income. After some notes on special population trends and immigration from foreign countries, trends dealing with the demography of education are also considered. Finally, the changes in the onset of puberty, that is, the passage into adolescence, are discussed.

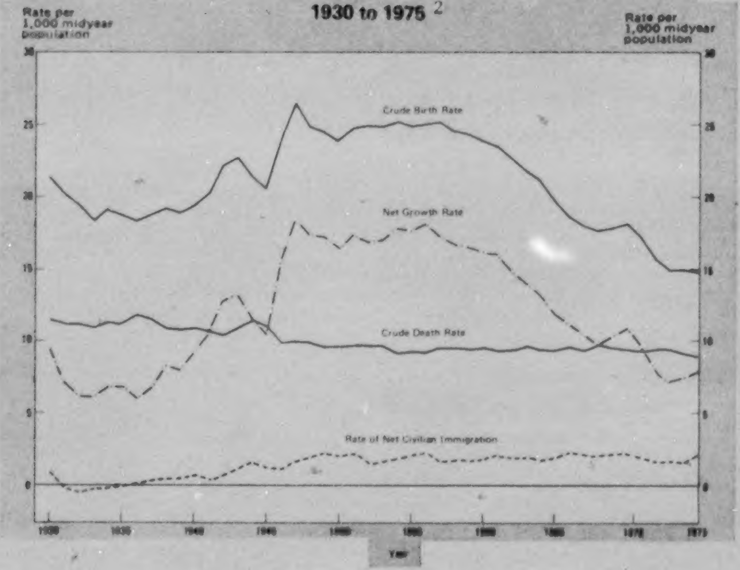
With regard to each section, as appropriate, some interpretation is made as to the implications for the educational system. Some critical non-demographic trends interacting with demographic trends are presented in Section XII.

A. Birth Rates[1]

The size and distribution of the U.S. population are the result of past birth, death, and migration rates. Of these three, changes in the birth rate have caused most of the fluctuation in the age distribution and population growth in the past several decades (Figure 3). The effect of the low fertility of the depression years, the post war baby boom and the more recent decline can be seen in Figure 1. By 1970, these changes in past fertility caused a bulge in the school age (including college) population; by 1975 they caused a decline in elementary school enrollments and increasing pressure on the entry level job market.

FIGURE 3

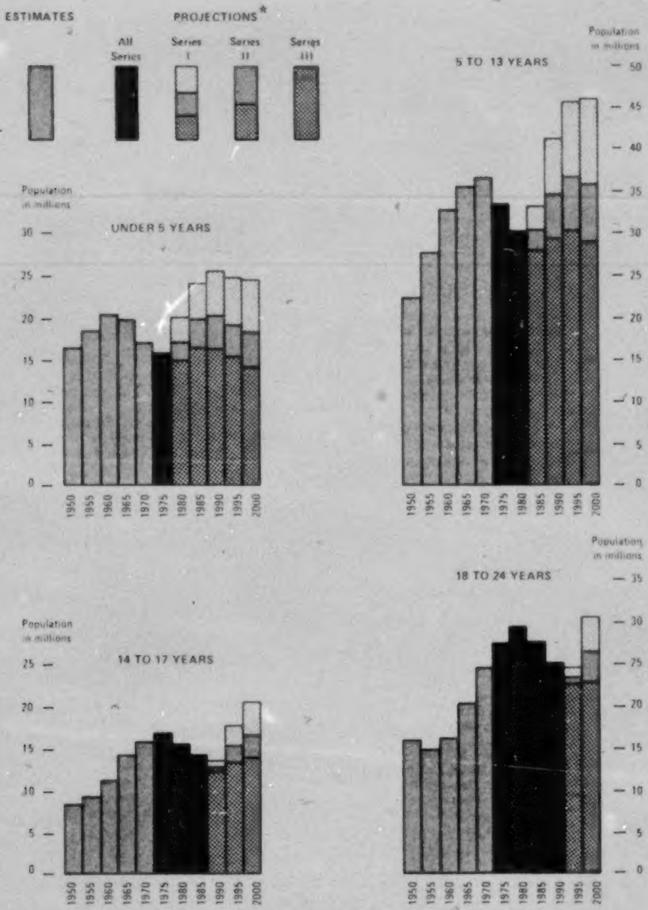
Annual Rates of Net Growth, Births, Deaths, and Net Immigration: 1930 to 1975 2



Since the death rate is unlikely to change much, and since immigration has been semi-controlled by law, it is possible to project the future size of cohorts (age groups) of persons already born with some accuracy. We know today the approximate size of the high school age population in 1990 (about 25 percent smaller than in 1975) and the college age population in the mid-1990's. We can predict with a useful degree of accuracy, the number of middle-aged persons at the turn of the century and the number of old age pensioners in 2040, although, obviously the longer the time horizon, the greater the chance that "all things" won't "be equal." However, to forecast the future size of the younger age groups whose members are not yet born and the age distribution of the entire population, it is necessary to predict the level of fertility. While predicting the number of children women will bear in the future is uncertain, the probable range can be calculated, since we know the number of women of reproductive age for at least fifteen years in the future. From surveys, we also have information on patterns of childbearing, and the number of children young women say they want and expect to have. Since the range of population size forecasts can be quite large depending on assumptions, different forecasts have different policy implications.

The Census Bureau has projected three sets of annual numbers of births based on the presumed completed family size of younger women. These are called Series I, II, and III and the differences they make in the projected size of age groups are shown in Figures 4 and 5. Series I assumes a completed family size of 2.7 children per woman, Series II, 2.1 children, and Series III, 1.7 children. The Census Bureau and most demographers suggest Series II as the most reasonable, based on surveys of birth expectations of young women.

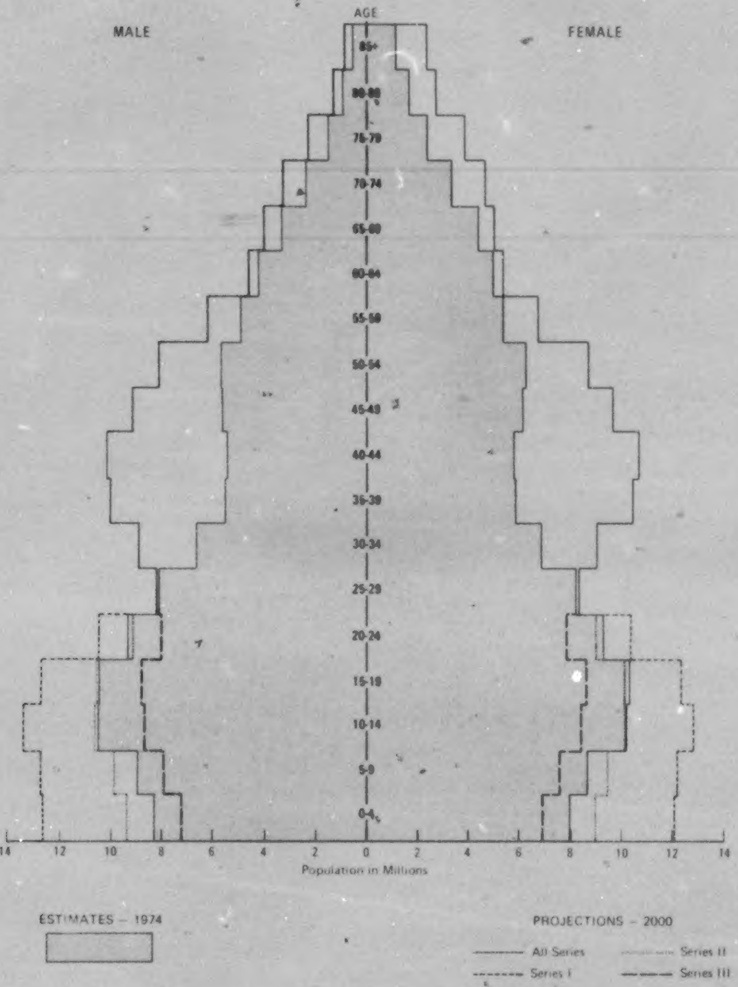
Fig. 4 **Estimates and Projections of the Population of the United States by Age: 1950 to 2000**[3]



*Series I assumes completed family size of 2.7 children
Series II assumes completed family size of 2.1 children
Series III assumes completed family size of 1.7 children

FIGURE 5

Estimates and Projections of the Population of the United States, by Age and Sex: 1974 and 2000[4]



B. Principal Implications Of Population Projections

The principal implications from the "best guess" forecasts is that recent declines in the elementary school population are likely to continue through the mid-1980's. Thereafter, the number of school children will rise, leveling off after 1990 to today's levels.

Similar declines at a slower rate and with a narrow range of variation will occur in the high school age group. School age populations from 1950 to the year 2000 are shown in Figure 4.

Figures 2, 4, and 5 all present the same basic information but in somewhat different formats. Figure 4 most graphically illustrates the implications of the choice of forecasting Series I, II, or III on anticipated school populations. Note that all three series show a steady decline in high school attendance to 1990. With regard to elementary school attendance, one can see a steady decline or leveling off through 1984 for both the lower bound assumption of 1.7 children and the most likely assumption of 2.1 children, followed by a rise in the number of children entering elementary school. The combination of high certainty about existing populations and the marginal uncertainty about soon-to-be-born populations is clearly shown in Figure 2.

Comparing Figure 5 with Figure 1, one can see how the baby boom has moved forward creating a bulge by the Year 2000 in the 30-55 year-old range. The lower part of that figure shows the alternate bulging or non-bulging depending on the assumptions adopted on ultimate family size. It is clear from these figures that the range of ultimate family size, and specific fertility rates are dominant considerations in the make up of yet unborn school populations. We will now turn to the discussion of the details of the trends in fertility.

C. Fertility Rates

During the past 10 years all indicators of fertility have shown a declining tendency for women to have children: women are marrying later in life, the first child is born later into the twenties, the second child is delayed compared with birth patterns in the 1950's, women are planning to have only two children in their lifetime instead of three or four as in the 1950's and they are having them at a rate in the 1970's that would produce about 1.8 children per woman if the current rates were followed for a lifetime. As shown in Figure 6, the births per thousand population rose rapidly in 1947-49 with the return of the GI's and the rates remained high for about the next fifteeen years. Since the early 1960's, there has been a steady decline to the present low of just under fifteen births per thousand. More interesting is a total fertility rate shown in Figure 6, which is an age-standardized measure of current fertility. It shows how many children a woman would bear if she experienced the current age specific birth rate during her entire reproductive span.

The comparison in Figure 6 dramatizes the "generational differences" in American childbearing. The fertility rates of the late 1950's would have produced almost four children per woman over her total lifetime. The present fertility rates would produce somewhat fewer than two births over the whole lifetime. These current figures reflect the long-term aspirations of young women. Survey research shows a long-term decline in reported numbers of expected children. Figure 7 shows the average number of children ever born to women 45 to 49 years old and illustrates

FIGURE 6

Annual Measures of Fertility: 1940 to 1974[5]

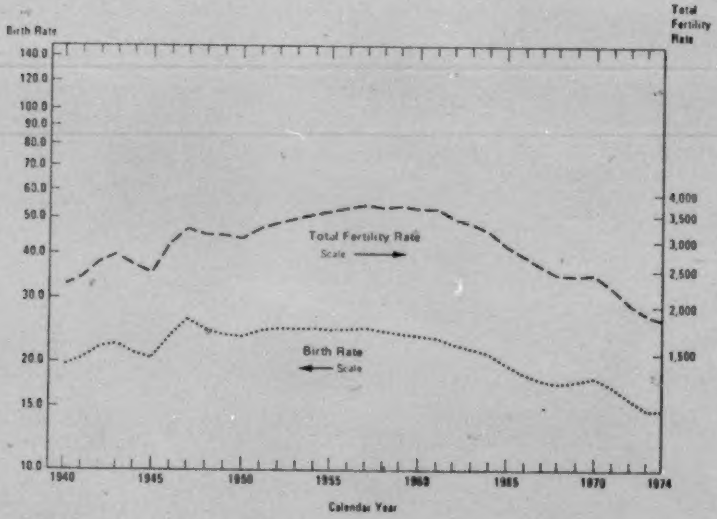
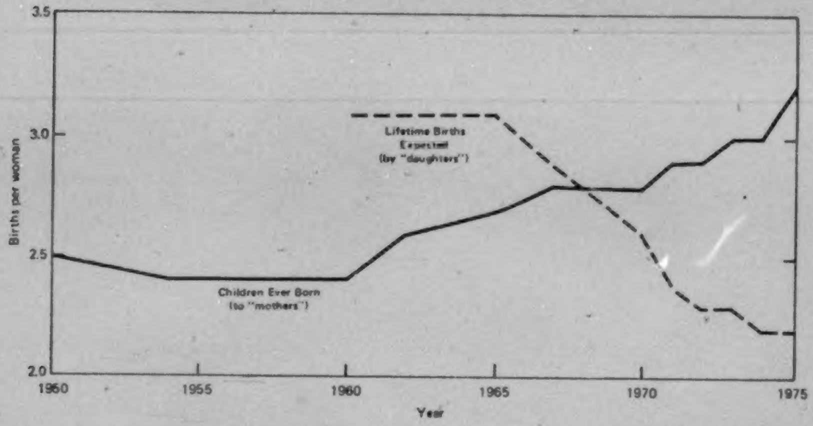


FIGURE 7

Average Number of Children Ever Born to Ever-Married Women 45 to 49 Years Old and Lifetime Births Expected to Currently Married Women 18 to 24 Years Old: Selected Years, 1950 to 1975[6]



the sharp decline in expected births by their daughters' generation, 18-24 year olds. For example, young married white women 18 to 24 in 1960, reported their total number of expected births to be 3.0; in 1967, 2.9; in 1971, 2.4, and in 1975, 2.1 (Table 4a). A parallel decline has occurred for Blacks--2.8 in 1968, to 2.5 in 1975.

The percentage of currently married women who are childless and the percentage expecting to remain childless are shown in Table 4b and Figure 13. A smaller percentage of Blacks expect to remain childless as of 1975. Among women 20 to 24 years old, 4.7 percent of whites and 1.4 percent of Blacks expect to remain childless as of 1975, among women 25 to 29, 4.9 percent whites and 4.3 percent Blacks expect to remain childless. Among women 30 to 34, it is 5.5 and 3.8 percent respectively.

The peak of the percentage of women never bearing children were those born in 1905-1909 (Figure 11). The birth rate of Blacks closely parallels that of whites. By the turn of the twentieth century, the Black-white fertility differential was still quite large but this differential narrowed considerably after World War I. Although large fertility swings in the Black population have paralleled those in the white population in the past fifty years, a fairly constant differential of 8 to 11 points has persisted in the crude birth rate (Figure 8 and Table 5).

A more detailed analysis of age-specific fertility trends in the United States since World War I is presented in Figures 9 and 10. For both races, a noticeable concentration of childbearing in the 20 to 29 year old age range has occurred in the past fifty years. Fertility of women over age 29 has drastically fallen for both races since 1920.

TABLE 4a Average Number of Births to Date and Lifetime Births Expected by Wives Reporting on Birth Expectations: Selected Years, 1955 to 1975 7

Race and year	18 to 24 years		25 to 29 years		30 to 34 years		35 to 39 years	
	Births to date	Lifetime births expected	Births to date	Lifetime births expected	Births to date	Lifetime births expected	Births to date	Lifetime births expected
ALL RACES								
1975	0.8	2.2	1.6	2.3	2.4	2.6	3.0	[illegible]
1971	1.0	2.4	1.9	2.6	2.8	3.0	3.2	[illegible]
1967	1.2	2.9	2.3	3.0	3.0	3.3	3.2	3.3
1965[1]	1.5	3.1	2.5	3.4	3.1	3.6	3.2	3.4
1960[1]	1.4	3.1	2.4	3.4	2.7	3.3	2.7	3.0
WHITE								
1975	0.8	2.1	1.6	2.2	2.4	2.6	3.0	3.0
1971	0.9	2.4	1.9	2.6	2.8	2.9	3.1	3.2
1967	1.1	2.9	2.3	3.0	3.0	3.2	3.1	3.2
1965[1]	1.3	3.1	2.4	3.3	3.0	3.5	3.1	3.3
1960[1]	1.3	3.0	2.3	3.5	2.6	3.2	2.7	3.0
1955[1]	1.1	3.2	1.9	3.1	2.3	3.0	2.6	2.9
BLACK								
1975	1.4	2.5	2.0	2.6	3.0	3.2	3.9	4.0
1971	1.4	2.6	2.5	3.1	3.5	3.7	4.1	4.2
1967	1.8	2.8	3.0	3.4	3.9	4.3	4.2	4.2
SPANISH ORIGIN[2]								
1975	1.0	2.2	1.8	2.6	3.0	3.2	3.4	3.4

[1] Data are from privately conducted in-depth surveys of fertility and related phenomena, and thus may not be strictly comparable with birth expectations data collected in other years.

[2] May be of any race.

TABLE 4b Childlessness Among Currently Married Women (Excluding Separated): 1960, 1970, and 1975 8

Age of woman at date of survey	1975[1]				1970		1960	
	White		Black		White	Black	White	Black and other races
CURRENTLY MARRIED WOMEN (thousands)								
15 to 19 years	752		66		891	118	877	116
20 to 24 years	3,723		294		4,352	430	3,318	373
25 to 29 years	4,673		392		4,869	441	4,147	473
30 to 34 years	4,263		339		4,345	427	4,733	506
35 to 39 years	3,682		317		4,266	407	5,014	487
	Childless to date	Expecting to remain childless[2]	Childless to date	Expecting to remain childless[2]	Childless to date			
PERCENT								
15 to 19 years	56.5	3.3	(B)	(B)	56.5	31.9	47.1	26.4
20 to 24 years	45.4	4.2	29.7	1.4	38.4	22.9	25.1	18.0
25 to 29 years	20.2	4.9	15.8	4.3	15.8	13.1	12.0	16.8
30 to 34 years	8.0	5.5	8.0	3.8	7.6	9.1	8.2	16.9
35 to 39 years	4.3	4.1	5.7	5.7	6.5	9.8	9.7	18.4

B Base less than 75,000.

[1] Data are limited to the 83 percent of the surveyed women who reported on birth expectations.

[2] Women "expecting to remain childless" are those currently married (excluding separated) and childless women who expect to bear no more children in the future.

Figure 8. Crude Birth Rate of White and Black Population. Ten Year Average 1860–1869 to 1870–1879 and Five Year Average 1880–1884 to 1970–1974[9]

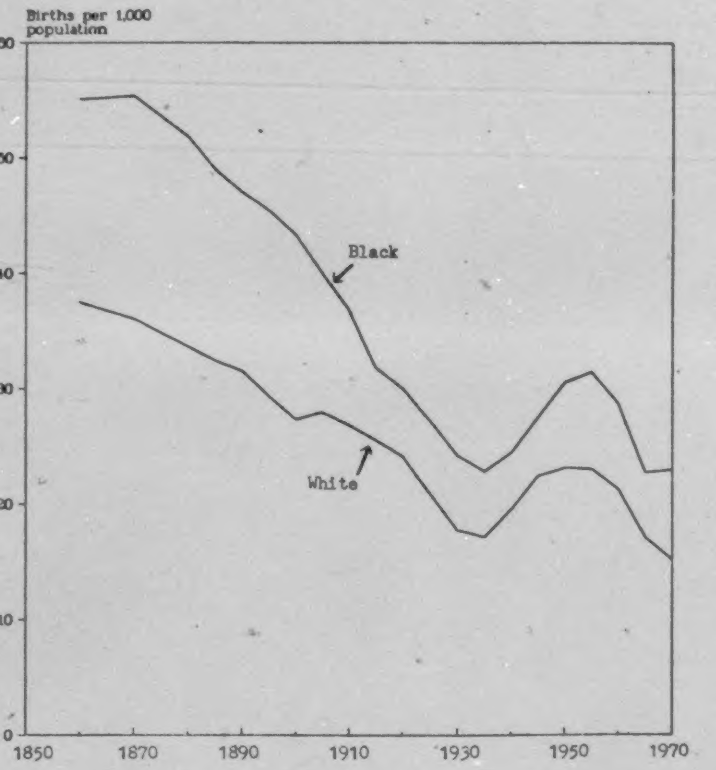


TABLE 5

CRUDE BIRTH RATE OF THE WHITE AND BLACK POPULATION: DECENNIAL AVERAGES 1860-1869 to 1870-1879 AND QUINQUENNIAL AVERAGES 1880-1884 to 1970-1974[10]

PERIOD	WHITE	BLACK	PERIOD	WHITE	BLACK
1860-69	37.5	55.1	1925-29	21.0	27.3
1870-79	36.1	55.4	1930-34	17.8	24.3
1880-84	33.7	51.9	1935-39	17.2	22.9
1885-89	32.5	49.1	1940-44	19.6	24.5
1890-94	31.6	47.1	1945-49	22.5	27.6
1895-99	29.4	45.5	1950-54	23.2	30.6
1900-04	27.4	43.4	1955-59	23.1	31.5
1905-09	28.0	40.1	1960-64	21.4	28.8
1910-14	26.9	36.9	1965-69	17.2	22.8
1915-19	25.6	31.9	1970-74	15.2	23.0
1920-24	24.2	30.1			

FIGURE 9
FERTILITY RATES FOR WHITE FEMALES[11]

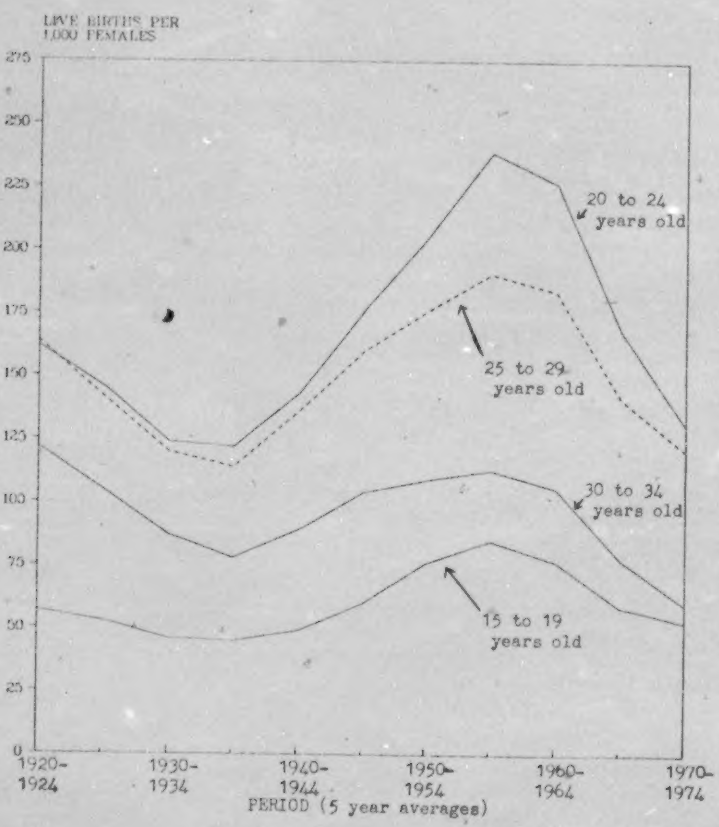


FIGURE 10
FERTILITY RATES FOR FEMALES OF
BLACK AND OTHER RACES[12]

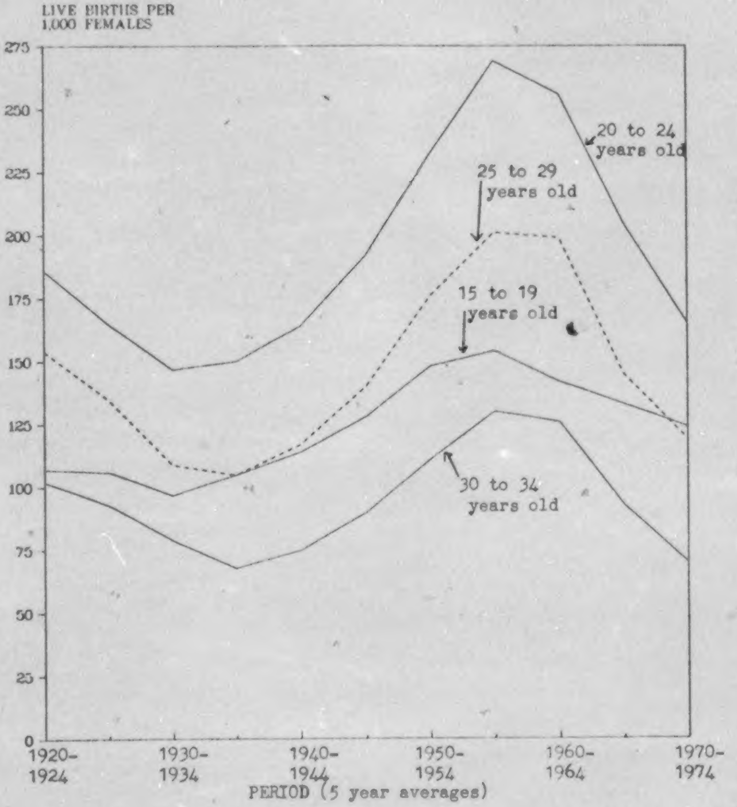
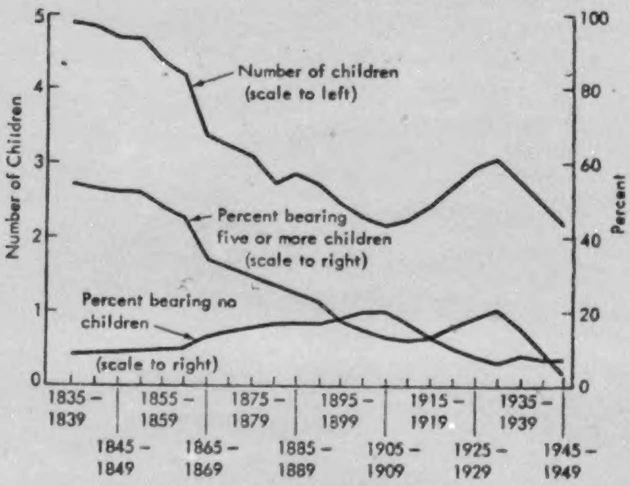


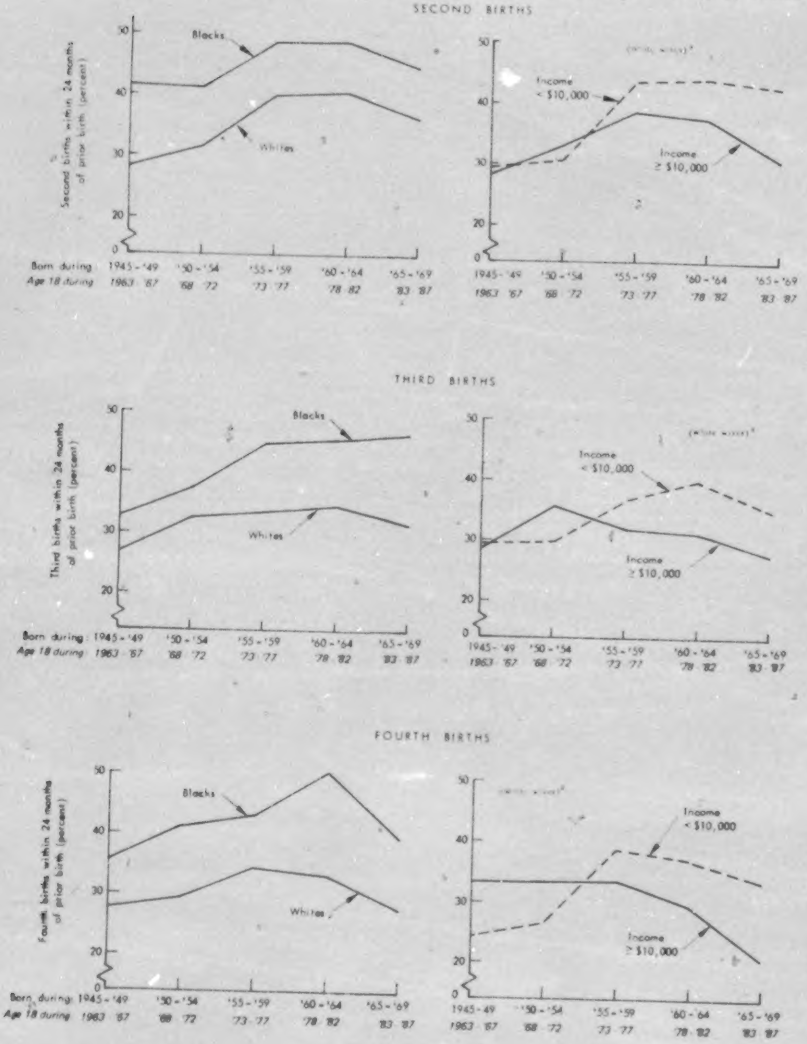
FIGURE 11

Fertility Measures for Birth Cohorts of White Women[13]



Data for the last three cohorts are estimates based on additional births expected according to a national sample survey.

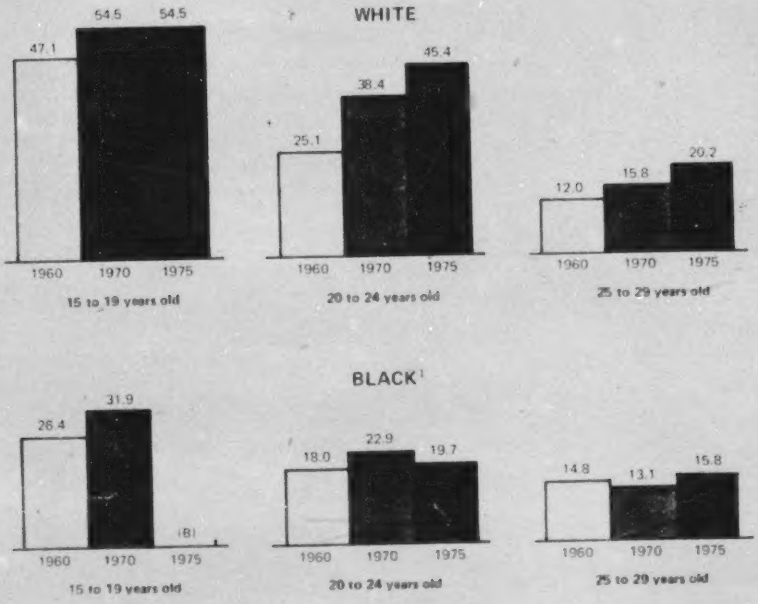
FIGURE 12· **Changing Incidence of Short Birth Intervals, by Race and Family Income** 14



a Childspacing data by family income are available for white wives only.

FIGURE 13

Percent Childless Among Currently Married Women 1960, 1970, and 1975 [15]



B Base less than 75,000.

[1] Black and other races for 1960.

MORE ON SERIES II

While Series II is the most likely projection, there are variations on it which have some interesting implications. Two additional projections have been made using an eventual completed family size of 2.1, the Series II assumption, but introducing certain variations in other assumptions underlying the projections. These projections were intended to illustrate the result of certain trends which, although considered possible by demographers, are felt to be somewhat less likely than those assumed to underlie the Census Bureau Series II.

SERIES II L

Series II L is based on a later timing of births than Series II. It assumes a sharper decline in teenage births between 1974 and 2000 than does Series II and a substantial increase in births to women in their thirties. This would move the mean age of childbearing from about 26 to 28. The actual age specific fertility for 1974 and the two projected sets for 2000 are shown below:[16]

	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49
1974	1.2	59.9	116.1	106.8	52.7	21.4	5.3	0.4
2000 (II)	0.3	46.4	144.2	143.6	62.2	19.6	4.7	0.3
2000 (IIL)	0.2	24.6	99.8	149.9	102.5	31.8	4.9	0.3

The pattern of age specific fertility in Series II is similar to that of many moderate to low fertility European countries, including England, France and Belgium. These countries have historically had lower teen-fertility than the United States and somewhat later marriage. While it is certainly possible that the U. S. could move to that pattern, the Series II pattern seems somewhat more probable in the light of our past history and heterogeneous population. The age pattern of the decline in American fertility between 1960 and 1974 lends support to Series II as the following figures indicate.

Percent change in Age Specific Fertility Rates [17]

US 1960-1975

Age	% Change
15-19	-37
20-24	-56
25-29	-44
30-34	-53
35-39	-65
40-44	-70
45-49	-67
Total	-51

Series II L demonstrates the effect on annual fertility of a delay or stretching out of a cohort fertility. Annual fertility is lower under Series II L than under Series II because each cohort's contribution to the total of any one year is less.

SERIES II R

Series II R, while based on an eventual cohort fertility of 2.1:

> ...assumes that the completed cohort fertility rate will vary inversely with the size of the birth cohort before leveling off in the long run. This assumption contrasts with the move traditional approach which has the completed cohort fertility rate more smoothly to its assumed ultimate level. Interest in the relative cohort size concept stems from the observed inverse relation between cohort size and cohort fertility in recent decades and from recent research on the possible influence of relative cohort size on the social and economic experience of young couples (e.g., in the areas of education, occupation, and income) which in turn could influence their fertility behavior."[18]

It assumes that only cohorts of 3.8 million will have replacement level fertility. Cohorts of 4.2 million, like those of the later baby boom years, are expected to average 1.9 children, while the smaller cohorts of the early 1970's will average 2.2 to 2.4. Successive cohorts will tend to over- and under-shoot 3.8 million and thus have lower or higher completed fertility. The projections in this series oscillate.

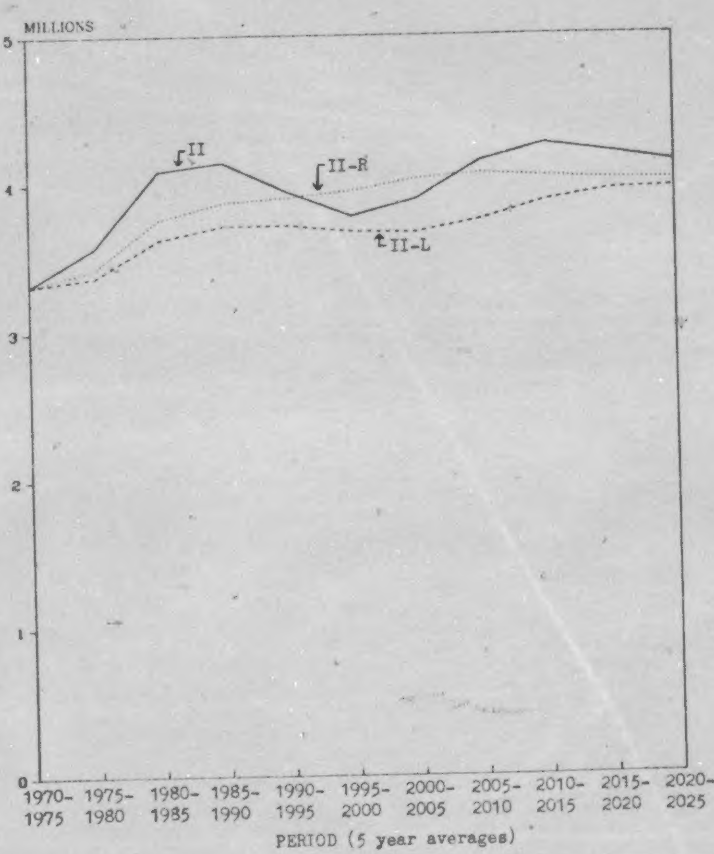
As shown in Table 6, the annual number of births in Series II R would increase to 3.6 million by 1980 and would reach 4 million by the end of the century. In contrast, the annual number of births would reach 4 million in the early 1980's under Series II. Figure 14 shows the relation of the several Series II projections.

TABLE 6. PROJECTIONS OF THE AVERAGE ANNUAL NUMBER OF BIRTHS FOR SERIES II, SERIES II-L, AND SERIES II-R: SELECTED YEARS, 1974 TO 2025[19]

(In thousands)

Year (July 1-June 30)	Series II	Series II-L	Series II-R
1974-1975	3,178	3,172	3,163
1975-1976	3,285	3,240	3,234
1976-1977	3,425	3,310	3,333
1977-1978	3,575	3,377	3,435
1978-1979	3,720	3,440	3,528
1979-1980	3,865	3,498	3,611
1980-1985	4,088	3,626	3,761
1985-1990	4,146	3,717	3,875
1990-1995	3,949	3,719	3,906
1995-2000	3,783	3,678	3,951
2000-2005	3,894	3,670	4,032
2005-2010	4,148	3,754	4,066
2010-2015	4,262	3,877	4,042
2015-2020	4,203	3,949	4,022
2020-2025	4,138	3,961	4,018

FIGURE 14. BIRTHS BY PATTERN OF COHORT FERTILITY: SERIES IIR, SERIES IIL[20]



SERIES II OR II L OR II R?

A society in which all women are highly motivated to limit themselves to two children will fall short of replacement since not everyone finds him or herself in a position to have children and not everyone is capable of having two children. However, insofar as some couples will probably want more than two, it is assumed that most cohorts will approach replacement level fertility (2.1).

Current cohorts of young women show signs of adopting this pattern. Recent survey data collected by the Bureau of the Census on the birth expectations of young wives aged 18 to 24, show that 58 percent expected just two children -- nearly 75 percent expected 2 or fewer. If these young wives do achieve their expectations, and other fertility surveys have shown a fairly close connection between the number of children women say they want and how many they eventually have, then they will experience 2.17 births per woman, on the average. Since women who are married at 18 to 24 tend to have more children than the cohort average, this works out, after the appropriate adjustment, to just about replacement fertility.

At present, it appears that the increasing acceptance of the rights of women to give priority to individual, non-familial interests, combined with a lessening of economic opportunity, will lead to replacement level fertility -- the Census Bureau's Series II, or some variant thereof for the current cohort of young women.

D. Expected Enrollment Trends Assuming Series II Fertility

Enrollments in Elementary Schools

As mentioned previously, the projection of enrollments beyond the early 1980's depends increasingly on the level of fertility assumed. All three assumed fertility levels discussed above result in the 10 percent decline in the population 5-13 years old between 1975 and 1980 (shown in Table 7 and Figure 15) since most of the children who will be in that cohort in 1980 had already been born when the projections were made. Thereafter, the projections diverge sharply. At the higher level of fertility (2.7 per woman), that age group (5-13) would increase 51% between 1980 and 2000, from approximately 30 million to nearly 46 million. Even under these conditions of rapid growth, the total of 1985 would be slightly under that of 1975; subsequent increases would be more rapid.

At the lower level of fertility (1.7 per woman) there would be a small net decline in those 20 years. This level of fertility would result in continued decline to 1985, then a return to the 30 million level of 1980 in the 1990's, declining again to 29 million by 2000.

The intermediate family size of 2.1 children would generate an increase in children at the kindergarten through eighth grade level which would peak at close to 37 million in 1995, (about the level of 1970), after remaining at about 30 million through most of the 1980's. By 2000, that group would be about 8 percent more numerous than it had been in 1975, or a little less than it had been in the peak years around 1970. The later pattern of childbearing (Series II L, 2.1

TABLE 7

Estimates and Projections of the Population by Selected Ages: 1950 to 2000[21]

Ages 5-13

Year	Series I	Series II	Series III	Series III,
1950	22,423			
1955	27,925			
1960	32,965			
1965	35,754			
1970	36,636			
1975	33,441			
1980	30,441	30,246	30,235	30,112
1985	33,330	30,380	29,378	27,954
1990	41,282	34,643	31,434	29,383
1995	45,728	36,799	32,868	30,320
2000	45,923	35,963	33,213	29,119

Table 7 (Continued)

Estimates and Projections of the Population by Selected Ages: 1950 to 2000

Ages 14-17

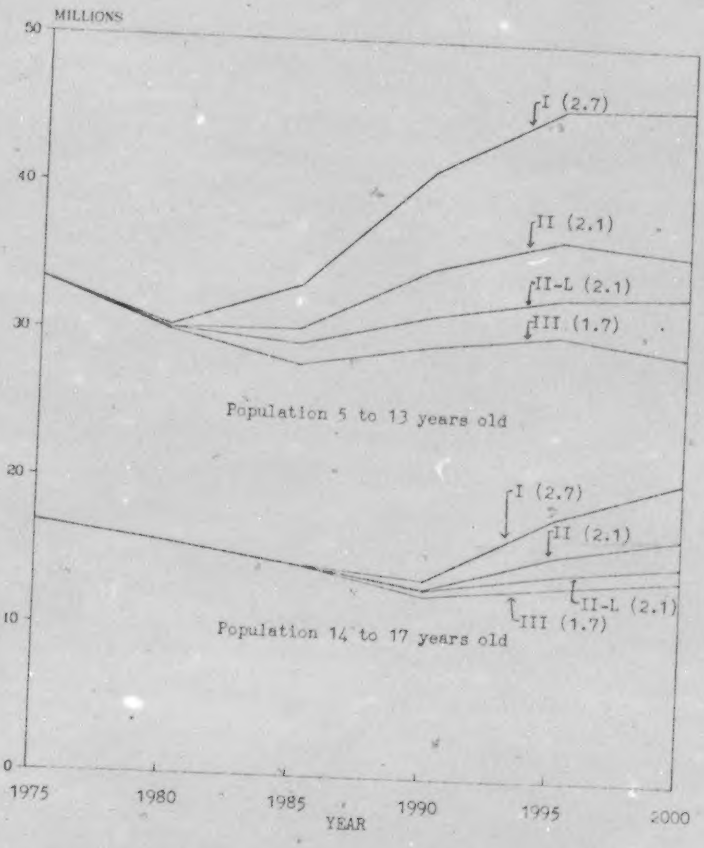
Year	Series I	Series II	Series IIL	SeriesIII
1950		8,444		
1955		9,247		
1960		11,219		
1965		14,153		
1970		15,910		
1975		16,923		
1980		15,753		
1985		14,388		
1990	13,538	12,941	12,879	12,463
1995	17,912	15,317	14,055	13,210
2000	20,575	16,752	14,873	13,915

children) would result in a steady decline to 29 million in 1985, and then an increase to 33 million by the end of the century.

Enrollments in Secondary Schools

Since persons who will be 14-17 years old in 1985 are already born, the 15 percent decline, from 16.9 to 14.4 million, in that age group (shown in Table 8 and Figure 15) is assured. A further decline to about 12 million in 1990 is also virtually certain. Thereafter, the different levels of fertility would begin to have some effect. If the higher level of fertility prevails there will be more than 20 million persons in this age group in 2000, 22 percent more than in 1975. If the lowest level occurs, there will be 18 percent fewer persons aged 14-17 in 2000 than there were in 1975. If families average the replacement level of 2.1, the sizes of this age group should be about the same in 2000 as in 1975. However, if the replacement level is achieved through later childbearing, the age group 14-17 would number about 14.8 million by the end of the century, about 12 percent lower than in 1975.

FIGURE 15. POPULATION PROJECTIONS BY ASSUMED LEVEL OF FERTILITY[22]



III. THE FAMILY

The traditional image of the family, the mother, father and several children, has been the underlying and often latent image of the American child's environment around which public policy has been framed. Increasingly, that model of the family is at at odds with reality. Rates of marriage, deferred marriage, increased divorce, and separation, as well as remarriage patterns, the size of households, the rates of their formation and the growing number of female-headed households are all radically changing the traditional environment of the child.[1] For example, it has been estimated that approximately 45 percent of children born in 1976 will have lived with a single parent for a significant period of time before they reach 18 years of age.[2]

These above changes, separately and together, have both direct and indirect implications for the school systems.

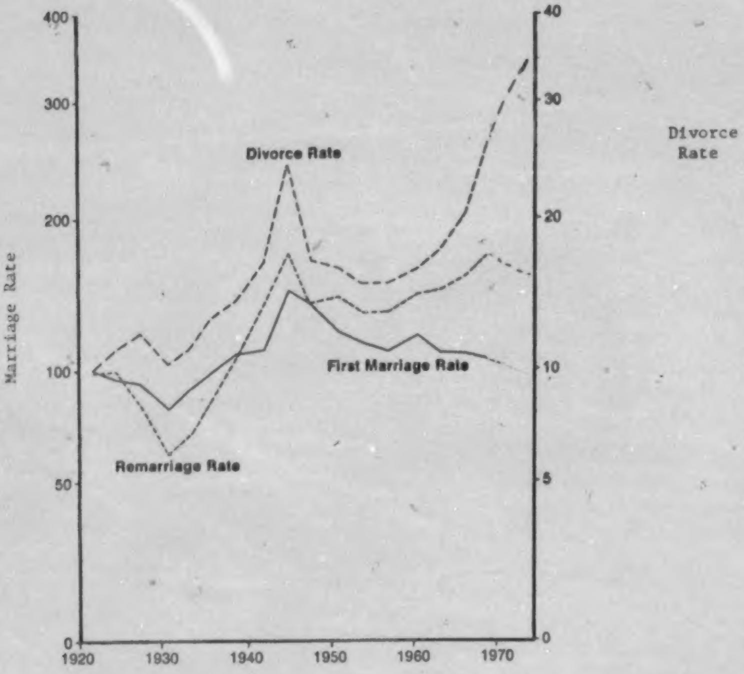
A. The Implications of Changing Family Demographic Patterns for Education

The structure, rate of formation, headship, age distribution, number of children and their legitimacy are likely to have a primary effect on the school system in terms of implicit needs as well as explicit demands for changes in curriculum and services in meeting the need of the child. These effects may be seen in terms of:

- o The socialization of children which may be influenced to a significant degree by marriage, divorce, separation, single parenthood, and the shifts of the size of the family.

FIGURE 16

FIRST MARRIAGE RATES PER 1,000 SINGLE WOMEN, DIVORCE RATES PER 1,000 MARRIED WOMEN, AND REMARRIAGE RATES PER 1,000 WIDOWED OR DIVORCED WOMEN: UNITED STATES, THREE-YEAR AVERAGES, 1921 TO 1971.[3]



- The amount of parenting time as influenced by the size of the family. On the one hand, smaller family size may tend to increase it. On the other hand delayed and deferred marriage and competing work and professional objectives of parents may reduce parenting time. The amount of parenting also will be influenced by whether there are one or two adults in the household.
- The degree of family concern and input to the child's education. Attitudes toward education will themselves be influenced by the educational level of the parents.
- The implicit need and explicit demand for services will almost certainly be greater and probably different for the non-conventional family.
- Patterns of maternity including the number and spacing of children may influence the mental and social development of the child and may impact the school significantly.
- Non-conventional family arrangements may influence the degree of volunteer services available to schools.
- In addition to the well-known problems of poverty in the traditional rural and urban poor, a new kind of poverty may be impacting on the school system. That is the poverty associated with divorce, separation and other family disruptions as it moves into and becomes a prominent feature of the middle class.

- Many of the trends marking a movement away from the conventional or traditional family are found to the greatest extent in metropolitan areas, particularly in central cities. These stress factors, creating latent and overt demands on the schools, may be hitting especially hard those school systems already in the most profound difficulty.

The family is decreasingly a dominant factor in child socialization. A child now entering the first grade may have been exposed to nursery school or day care. He may have been involved with Head Start or related programs, or have had extensive exposure to television. The size of his sib-ship (the total number of children in his family) is different from what it had been for children born ten years ago. Roles of organized religious groups, grandparents, other members of the family and adults seem to be changing as agents of socialization. For those children raised in one-parent families, the amount of time spent with the parent is clearly diminished. There is frequently stress and almost always relative if not absolute poverty in such households. Limited income creates new demands and stresses as well as the need, if not the pressure, for compensatory public services.

In the same way that divorced and separated families promote single-family households, the substantial rise in the proportion of illegitimacy, particularly among the urban poor, condemns large numbers of children to environments of extreme financial poverty. As a general proposition, separation and divorce also engender poverty. The increase in working mothers is, in turn, creating pressures for day care, early nursery school, and other custodial services.

Therefore, in looking at the trends relating to families, one must keep these points of impact in mind. Further, one must be aware that even nationwide patterns vary to some degree within geographic regions, socio-economic status, cultural, and ethnic background, and urban or rural environments.

As a general conclusion, documented below, the shifting patterns of families are promoting the need and the demand for new public services, many of which will accrue to the school. Among these are new compensatory curriculum developments and an expanding repertoire of school services that compensate for transient or longer term home deficiencies.

It might also be noted that the pattern of deferred marriage causes many women to enter the work force early, and to continue in the work force even during childbearing years. This further compounds the complexities of the school situation. Finally, it should be noted that while there is currently much turbulence in the family environment, with changing attitudes toward divorce and living arrangements, the search for an adequate family arrangement is still the overwhelmingly dominant theme in American life. This search usually leads directly into marriage but often indirectly to divorce and remarriage.[4]

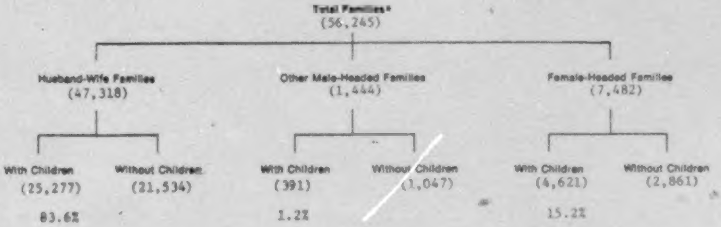
That search can be stressful. Recent estimates have shown that one-third of recent marriages may end in divorce. The number of children raised in broken families will probably increase as a proportion of all children. The proportion of children living with both parents declined from 88 percent in 1960, to 83 percent in 1970, and reached 80 percent in 1976. Between 1970 and 1976 the number of children living with a divorced mother increased by two-thirds, and the number living with a single mother increased by about 40 percent.

B. Some Data on the Family

In 1976 there were 211 million Americans living in nearly 73 million households. In these households lived 56 million families. The overwhelming number, some 47 million of them, were husband and wife families. There were a small number of other male-head families (1.4 million) and 7.5 million families headed by females (Figure 17).

Thirty million one hundred seventy-seven thousand families had children under the age of 18 and 26,000,000 of those families were husband/wife families. There were 446,000 male-headed families and 4.6 million female-headed families. In 1976, 84 percent of the children were living in husband/wife families and 15 percent in female-headed families.

FIGURE 17
DISTRIBUTION OF FAMILIES BY SEX OF HEAD
AND PRESENCE OF CHILDREN, 1976[5]
(Numbers in thousands)


Total Families*
(56,245)
Husband-Wife Families
(47,318)
Other Male-Headed Families
(1,444)
Female-Headed Families
(7,482)
With Children
(25,277)
83.6%
Without Children
(21,534)
With Children
(391)
1.2%
Without Children
(1,047)
With Children
(4,621)
15.2%
Without Children
(2,861)

*Includes secondary as well as primary families.

Source: "Household and Families, By Type: March 1976," Series P-20, No. 296, Current Population Reports, Washington, D.C.: U.S. Bureau of the Census.

Note: In 1976, there were 72 million households. Of these, 16.8 million involved primary individuals, that is, individuals living alone or with other non-relatives. Over 56 million households were established for families.

TABLE 8

NUMBER OF CHILDREN UNDER 18 YEARS OLD BY LIVING ARRANGEMENTS: UNITED STATES, 1976, 1970, AND 1960[6]

(Numbers in thousands)

Living Arrangements	Years			% Increase	% Increase
	1976	1970	1960	1976/1960	1976/1970
All children under 18	65,129	69,523	64,310	1.3	- 0.6
Living with:					
2 parents	52,101	57,744	56,287	- 7.4	- 9.7
1 parent	11,121	9,318	5,832	90.75	79.27
Living with parent					
-Divorced	4,407(40)	2,660	1,339	229	65.7
-Married	4,026(36)	3,803	2,710	48	5.9
-Separated	3,366(30)	2,482	1,616	108	35.1
Widowed	1,531(14)	1,953	1,540	(-)1	(-)22
Single	1,157(10)	903	242	378	28.1
Other Arrangements	1,908(18)	2,461	2,191		

TABLE 9

NUMBER OF CHILDREN UNDER 18 YEARS OLD BY LIVING ARRANGEMENTS: UNITED STATES, 1976, 1970, AND 1960[7]

(Numbers in thousands)

Living arrangements	Years			Ratio		
	1976	1970	1960	1976/1960	1976/1970	1970/1960
All children under 18	65,129	69,523	64,310	1.01	.94	1.08
Living with:						
Two parents	52,101	57,744	56,287	.93	.90	1.03
One parent	11,121	9,318	5,832	1.91	1.19	1.60
Mother only	10,310	7,979	5,106	2.02	1.29	1.56
Divorced	4,017	2,419	1,210	3.32	1.66	2.00
Married	3,797	3,113	2,363	1.61	1.22	1.32
Separated	3,200	2,335	1,499	2.13	1.37	1.56
Widowed	1,357	1,651	1,311	1.04	.82	1.26
Single	1,139	797	221	5.15	1.43	3.61
Father only	811	1,339	726	1.12	.61	1.84
Divorced	390	241	129	3.02	1.62	1.87
Married	229	690	347	.66	.33	1.99
Separated	166	157	117	1.42	1.06	1.34
Widowed	174	302	229	.76	.58	1.32
Single	18	106	21	.86	.17	5.05
Other relatives only	1,476	1,619	1,559	.95	.91	1.04
Nonrelatives only[1]	432	842	632	.68	.51	1.33

---

[1] For 1976 excludes children living in institutions; in 1970, 247,000 lived in institutions.

TABLE 10

PERCENT DISTRIBUTION BY LIVING ARRANGEMENTS OF CHILDREN UNDER 18 YEARS OLD: UNITED STATES, 1976, 1970, AND 1960[8]

Living arrangements	Years			Ratio		
	1976	1970	1960	1976/1960	1976/1970	1970/1960
All children under 18	100.0	100.0	100.0	-	-	-
Living with:						
Two parents	80.0	83.1	87.5	.91[1/]	.96	.95
One parent	17.0	13.4	9.1	1.87	1.27	1.47
Mother only	15.8	11.5	7.9	2.00	1.37	1.46
Divorced	6.2	3.5	1.9	3.26	1.77	1.84
Married	5.8	4.5	3.7	1.57	1.29	1.22
Seperated	4.9	3.4	2.3	2.13	1.44	1.48
Widowed	2.1	2.4	2.0	1.05	.88	1.20
Single	1.7	1.1	0.3	5.67	1.55	3.67
Father only	1.2	1.9	1.1	1.09	.63	1.73
Divorced	0.6	0.3	0.2	3.00	2.00	1.50
Married	0.4	1.0	0.5	.80	.40	2.00
Seperated	0.3	0.2	0.2	1.50	1.50	1.00
Widowed	0.1	0.4	0.4	.25	.25	1.00
Single	0.1	0.2	0.0	--	.50	-
Other relatives only	2.3	2.3	2.4	.96	1.00	.96
Nonrelatives only[2/]	0.7	1.2	1.0	.70	.58	1.20

[1/] This ratio is the result of dividing 80.0 by 87.5.

[2/] For 1976 excludes children living in institutions; in 1970, 0.4 percent lived in institutions.

TABLE 11

CHILDREN LIVING WITH A CURRENTLY DIVORCED PARENT
BY SEX OF PARENT AND AGE OF CHILD:
UNITED STATES, 1976, 1970, AND 1960[9]

(Numbers in thousands)

Age of child and sex of divorced parent	Year			Ratio		
	1976	1970	1960	1976/1960	1976/1970	1970/1960
Children under 18 living with a divorced parent	4,407	2,660	1,339	3.29	1.66	1.99
Living with mother	4,017	2,419	1,210	3.32	1.66	2.00
Living with father	390	240	129	3.02	1.63	1.86
Percent of total	8.8	9.0	9.6	–	–	–
Children under 6	863	592	NA	NA	1.46	NA
Living with mother	811	557	NA	NA	1.46	NA
Living with father	52	35	NA	NA	1.49	NA
Percent of total	6.0	5.9	–	–	–	–
Children 6 to 17	3,546	2,067	NA	NA	1.72	NA
Living with mother	3,206	1,862	NA	NA	1.72	NA
Living with father	340	205	NA	NA	1.66	NA
Percent of total	9.6	9.9	–	–	–	–

There has been a striking change in these ratios since 1960. Compare 1960, 1970, and 1976 (Tables 8, 9, and 10). From 1960 to 1976, there was an overall 90.7 percent increase in the number of children living with one-parent families, a 7.4 percent decline in those living in two-parent families. There was an overall 1.3 percent increase in the total number of children.

The increase in non-white children living in one-parent families was 68 percent, compared to 35 percent for whites.

The source of this special situation of the one-parent family in 1976 is fourfold. Of one-parent children, 14 percent were living with widows, 40 percent with a divorced parent, 30 percent with a separated parent.and 10 percent with a single parent (Table 11).

C. Age Patterns of Marriage

According to Taeuber and Sweet, in the 19th Century most women married between the ages of 18 and 23.[10] Gradually the age of marriage increased and reached a high point with that group of women born from 1865 to 1874 (Figure 18). Age of marriage since then has steadily declined so that the earliest marrying group of women in recent times were those born between 1935 and 1939, marrying usually in the late 1950's and early 1960's. The trend has now undergone another and even sharper reversal. Women born after World War II, entering the traditional age of marriage in the late 1960's and early 1970's have been delaying marriage beyond the teen-age years (Figure 18). This is strikingly illustrated in Table 12 in terms of percent of women ever married at selected age groups in 1960 and 1974. There is no concrete evidence that marriage is going out of style, but rather that it is being deferred--in part due to women's entry into the work force, in part in terms of completing an education, and in part as a reflection of a new social trend toward couples living together without marriage or while waiting until a decision is made to have children.

Taeuber and Sweet point out that the impacts of schooling on marriage at least in deferring marriage, result from:

- o desire to complete the educational process (women who get married are more likely to quit school)
- o changes in attitudes toward life style
- o the effects of family background on attitudes and continued attendance at school

There has been a long-term shift in the population of children under 18 years old per family as shown in Figure 19. The smallest average population of this age group since 1940 was in 1950, approximately 1.35 children per family. That rose to a peak in 1964-5, when it reached 1.45 children per family, and has since rapidly declined so that, in 1975, we are back to the 1950 ratio. Since this calculation

FIGURE 18

Age Pattern of Marriage for Birth Cohorts of White Women[11]

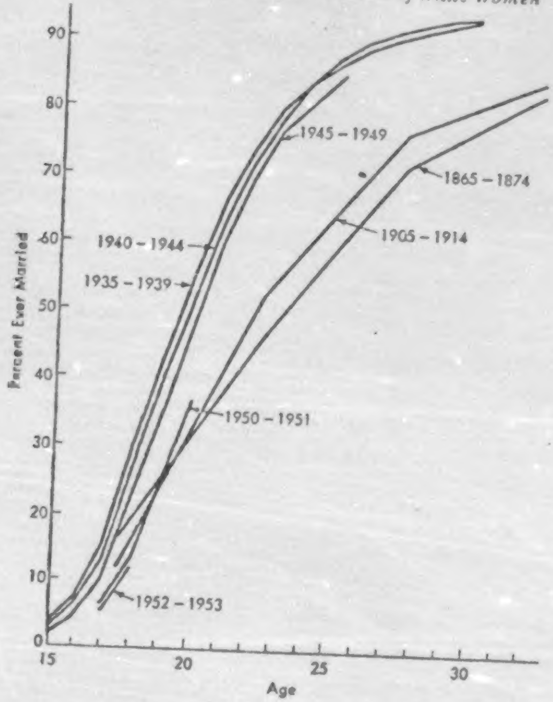


Table 12. Percentages of Ever Married Women at Selected Ages, 1960 and 1974[12]

TABLE 12

Age	*1960*	*1974*
18	24%	18%
20	54	42
22	74	62
24	84	77

FIGURE 19. AVERAGE POPULATION UNDER 18 YEARS OLD PER FAMILY: 1940 TO 1975[15]

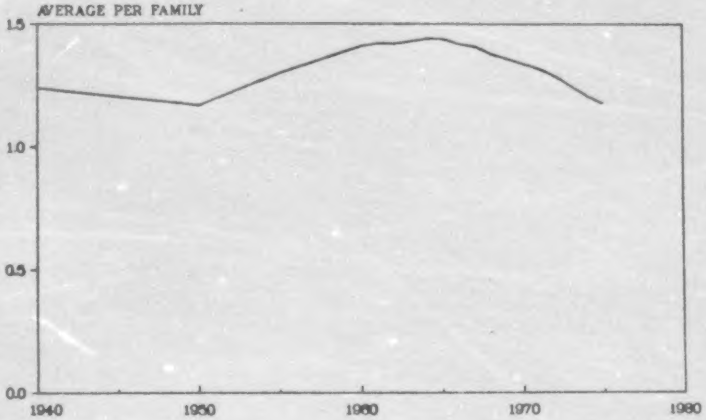


TABLE 13

Number of families and average number of own children under 18 years old, by type of family, labor force status of mother, and race, March 1970 and March 1974[16]

Type of family, labor force status of mother, and race	March 1970		March 1974	
	Number of families with children under 18 years old (thousands)	Average number of children per family [1]	Number of families with children under 18 years old (thousands)	Average number of children per family[1]
ALL FAMILIES				
Husband-wife families	25,547	2.29	25,275	2.14
Mother in labor force	10,210	2.15	10,907	2.03
Mother not in labor force	15,337	2.37	14,368	2.23
Female family head	2,924	2.29	4,080	2.12
Mother in labor force	1,731	2.06	2,438	1.89
Mother not in labor force	1,193	2.63	1,642	2.46
WHITE				
Husband-wife families	23,285	2.25	22,887	2.12
Mother in labor force	8,970	2.10	9,565	2.00
Mother not in labor force	14,315	2.34	13,322	2.21
Female family head	1,994	2.05	2,731	1.95
Mother in labor force	1,237	1.88	1,742	1.79
Mother not in labor force	757	2.34	989	2.24
NEGRO				
Husband-wife families	2,001	2.67	2,020	2.35
Mother in labor force	1,120	2.51	1,160	2.24
Mother not in labor force	881	2.87	860	2.49
Female family head	912	2.77	1,289	2.46
Mother in labor force	485	2.48	671	2.12
Mother not in labor force	427	3.10	618	2.82

includes families with no children, the curve for families with children would average about one unit higher. The movement to smaller family size has effects on available child care and socialization, and involves shifts in attitudes and behavior. These all have implications for the school.

The average number of persons in a family has been decreasing since 1965 and should continue to decrease as fertility rates level off. "The average number of children per husband-wife family with children dropped from 2.29 in 1970 to 2.14 in 1974; the decline was of a similar degree for families headed by women (Table 13). As in past years, 1974 found fewer children, on the average, in families where the mother was in the labor force. This was the case whether the families were headed by men or women, and whether they were Black or white."[13]

D. Single Parent Families

Forty-five percent of children born in 1977 may expect to live in a single-parent situation before reaching the age of 18, according to a recent Census estimate.

This is shown in the calculation in Table 14 to be due to premarital births, divorce, separation and parental death. According to Norton,[14]

> In an historical context, the projection of 45 percent may be compared to estimates prepared by Mary Jo Bane and published in her book Here to Stay, American Families in the Twentieth Century. Bane estimates that about 29 percent of the children born during the period 1901 to 1910 were involved in a single-parent situation before they reached the age of 18. The differential between Bane's figure for children born 65 to 75 years ago and that projected for children born in 1977 may not seem particularly startling. However, when one examines the causal factors, some striking differences do become apparent. For example, the Bane estimate indicates that nearly eight out of every ten children who had lived with only one parent during the early part of this century did so because of the death of a father or a mother. By way of contrast, only seven out of every 100 children expected to be in a one-parent situation in the next 18 years live so because of the death of a parent. Conversely, divorce and long-term separation are expected to account for about 71 percent of the single-parent situations in the next 18 years as compared with accounting for only 20 percent of the single-parent situations among the children born in the 1901-to-1910 period. Premarital births accounted for one percent of the single-parent situations for the Bane group and for 22 percent in the projected estimate.
>
> ...not only can more children be expected to live with only one parent in the near future than in the past, but the children will very likely be much younger when they experience this situation than their early twentieth century counterparts.

The number of husband/wife households has been steadily rising since 1950, and reached a level of some 46 million households of that type in 1974, amounting to an approximate 20 percent increase in husband/wife children households since 1950. However, the growth of female-headed households with children, covering some 4 million in 1974, increased over 250 percent in the same time period (Figure 20).

TABLE[74] 14

"Methodological Approach to Longitudinally Projecting the Porportion of Children Born in 1977 Who May be Expected to Spend Some Meaningful Length of Time in a Single-Parent Situation Before Reaching the Age of 18--and Related Discussion"[47]

This calculation was made on the basis of a consideration of trends in premarital births, divorce, long-term separation, and death (as they apply to a parent or parents). These four components were treated as being mutually exclusive and were applied to an hypothetical 100 babies born in 1977.

The following is a step-by-step description of the method of computation:

(1) Premarital births.--Currently the estimated illegitimacy rate is 14 percent of all births. Since about 90 percent of premaritally born children are retained by their mother and since about 80 percent of the mothers remain unmarried for 1 year or more after the premarital birth, about 10 percent of the original 100 babies would live in a single-parent situation for at least 1 year (e.g. 14 x .9 = 12.6 x .8 = 10.1).

(2) Divorce.--Through step (1) the original group of 100 had been reduced to 90 (the 4-percent premaritally born children [14 percent minus 10 percent from step (1)] were added back into the eligible universe on the assumption that nearly all of them would eventually be in two-parent families by virtue of the mother's marriage or through adoption). The most recent estimate of the proportion of first marriages to young adults that may eventually end in divorce is about 35 percent. However, because this estimate is upwardly influenced by persons who had borne a child before marriage and by childless couples, a reduction to 30 percent seemed reasonable. Thus, 30 percent of the remaining 90 children yields an estimated 27 percent of the original cohort of 100 children.

(3) Separation.--This is the most difficult component to estimate since many separations end in divorce (included in (2) above) and many are short-term ending in reconciliation. However, existing data indicate that long-term separations that either end in reconciliation or last indefinately would affect about 5 percent of the original 100 children.

(4) Death of a parent.--The most straightforward approach to determining the probable impact of this component on the chances of a child living in a single-parent situation was to use a life table to estimate the joint survival rates of men and women based on the average age of women at childbearing (26 years old) and increasing the age of men by 2 years (28 years old). This approach indicated that about 8 percent of all men and women would not survive jointly for the next 18 years. However, since the life tables available were not stratified by marital status, the 8-percent level was reduced to 6 percent on the assumption that married persons have somewhat greater longevity than nonmarried persons. The 6-percent estimate was then applied to the remaining 58 eligible children (derived by subtracting those estimated to have been involved in a single-parent situation because of (1) - (3) above) giving an estimate of 3 percent of the original 100 babies.

(5) Final estimate.--This was obtained by summing the results of steps (1) 10 percent, (2) 27 percent, (3) 5 percent, and (4) 3 percent to achieve the final 45-percent estimate. Given recent trends in the components used and understanding the tenuous nature of speculating about the future, this appears to be a reasonable estimate.

April 8, 1977

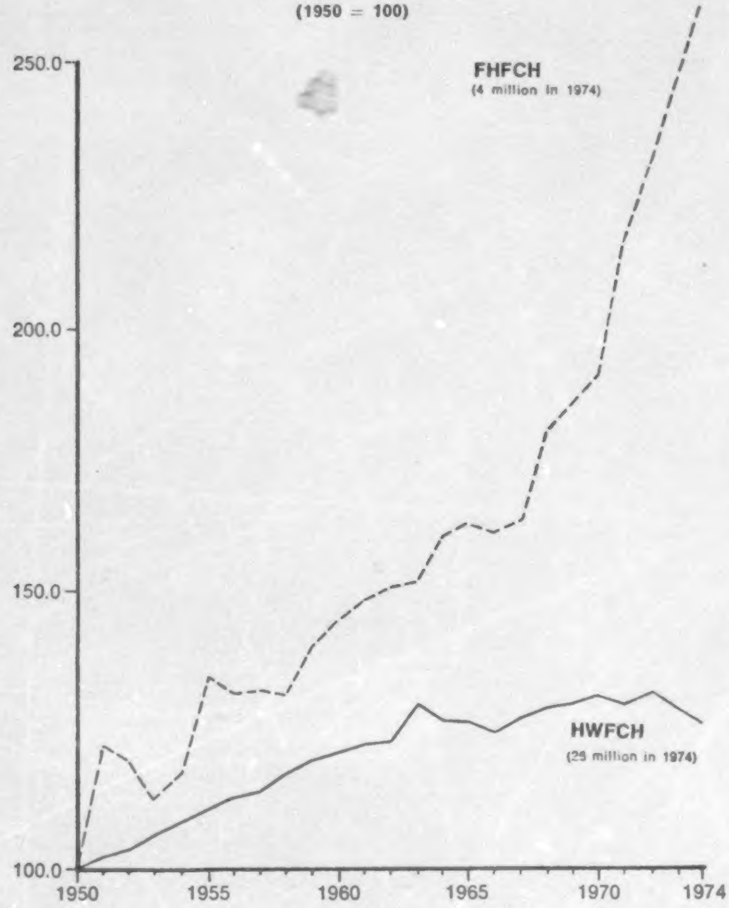
RESEARCH NOTE

Arthur J. Norton
Population Division

FIGURE 20

GROWTH OF FEMALE-HEADED FAMILIES WITH CHILDREN (FHFCH) AND HUSBAND-WIFE FAMILIES WITH CHILDREN (HWFCH) 1950-1974[18]

(1950 = 100)



The same data are illustrated in the pie chart, Figure 21 and the detail in Table 15. The striking increase of female-headed households among Blacks is shown in Figure 22.

The underlying cause of the growth of single-parent families is in part illustrated in Figure 16 which shows the increase in divorce rate and relative lag in remarriage rate particularly for women. It is also worth noting, incidentally, that the rate of first marriage has been declining since the late 1940's but is roughly equal to the pre-World War II, post-Depression rates.

The relationship between numbers of divorces and numbers of children involved in divorce is shown in Figure 23 from a recent National Research Council study. The same Figure shows the rates of children involved in remarriage of divorced parents. The difference between those two curves suggests the number of children at any one time and in a single-parent family as a result of divorce and the delay in remarriage.

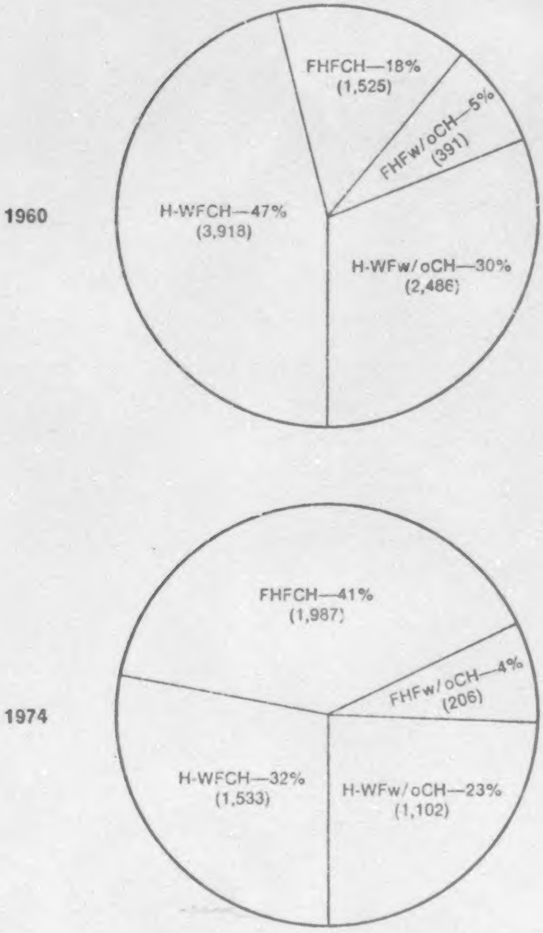
A more detailed look at the marriage dissolution rates is shown in Table 16.

E. Single Parent Families are Impoverished

The profound influence and the change in the pattern of single-family headedness on relative poverty can be seen graphically in Figure 24, which shows the change from 1968 to 1974 in the percent of families of various income levels in female-headed households in relation to all families. So for example, in 1974 the overwhelming majority, about

FIGURE 21

PROPORTION OF FAMILIES BY FAMILY TYPE LIVING IN POVERTY, 1960-1974* 19



*Actual number of families in thousands in parentheses.
FHFCH = Female-Headed Families with Children under 18.
H-WFCH = Husband-Wife Families with Children under 18.
w/oCH = without Children.

FIGURE 22.
FEMALE HEADED FAMILIES AS PROPORTION OF ALL FAMILIES BY RACE: 1955 TO 1975[20]

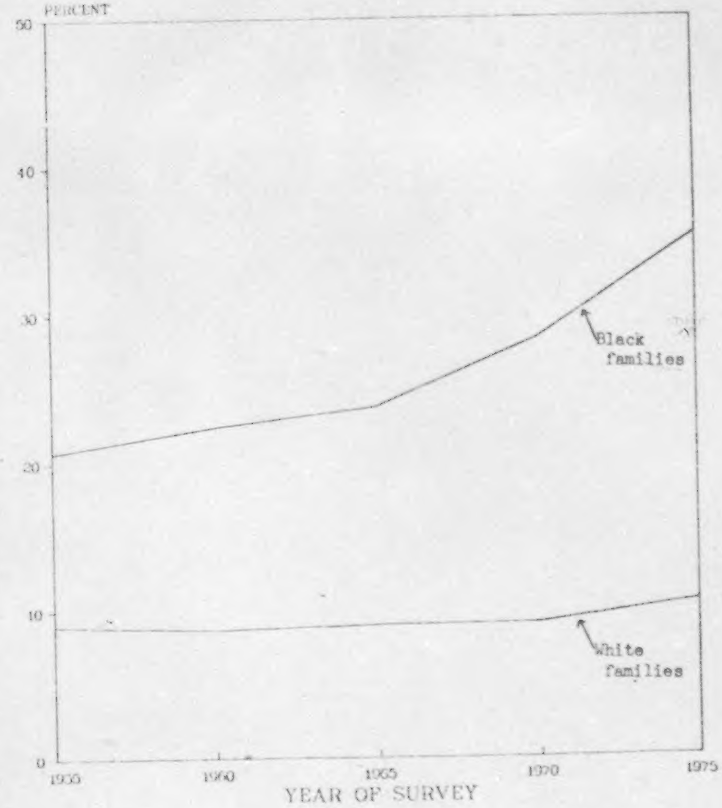


TABLE 15

TOTAL HOUSEHOLDS, 1940-1974 21

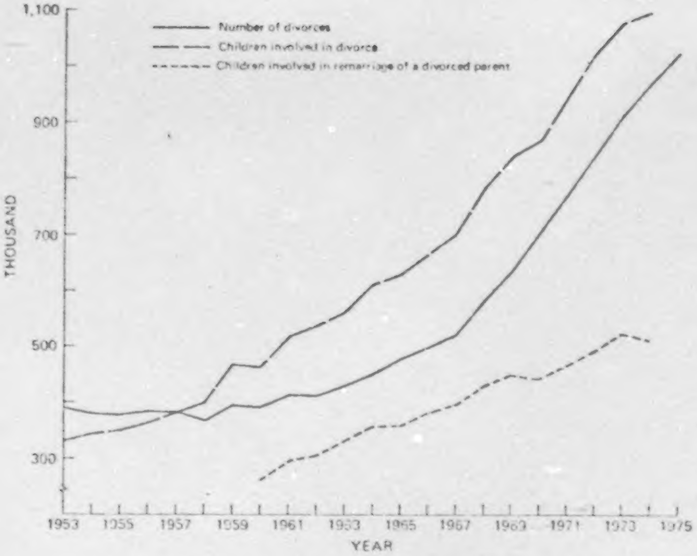
(Numbers in thousands)

		PRIMARY FAMILY HOUSEHOLDS						OTHER HOUSEHOLDS			
		Husband-Wife		Male Head		Female Head		Male Primary Indv.		Female Primary Indv.	
	TOTAL	No.	% of Total HH	No.	% of Total HH	No.	% of Total HH	No.	% of Total HH	No.	% of Total HH
July 1940	34,949	26,571	76.0	1,510	4.3	3,410	9.8	1,599	4.6	1,859	5.3
March 1950	43,554	34,075	78.2	1,169	2.7	3,594	8.3	1,668	3.8	3,048	7.0
April 1951	44,656	34,378	77.0	1,161	2.6	3,974	8.9	1,731	3.9	3,438	7.7
April 1952	45,504	35,138	77.2	1,138	2.5	3,959	8.7	1,756	3.9	3,543	7.8
April 1953	46,334	35,560	76.7	1,205	2.6	3,753	8.1	1,892	4.1	3,952	8.5
April 1954	46,893	35,875	76.5	1,313	2.8	3,751	8.0	1,904	4.1	4,028	8.6
April 1955	*47,874	36,251	75.7	1,328	2.8	4,153	8.7	2,059	4.3	4,083	8.5
March 1956	*48,902	37,067	75.8	1,418	2.9	4,157	8.5	2,058	4.2	4,250	8.7
March 1957	*49,673	37,702	75.9	1,242	2.5	4,322	8.7	2,038	4.1	4,374	8.8
March 1958	*50,474	37,906	75.1	1,262	2.5	4,240	8.4	2,329	4.6	4,718	9.3
March 1959	*51,435	38,422	74.7	1,286	2.5	4,269	8.3	2,449	4.8	5,015	9.8
March 1960	*52,799	39,254	74.3	1,228	2.3	4,435	8.4	2,716	5.1	5,179	9.8
March 1961	*53,464	39,531	73.9	1,226	2.3	4,541	8.5	2,832	5.3	5,333	10.0
March 1962	54,652	40,339	73.8	1,265	2.3	4,581	8.4	2,927	5.4	5,540	10.1
March 1963	55,189	40,836	74.0	1,296	2.3	4,679	8.5	2,845	5.2	5,531	10.0
March 1964	55,996	41,257	73.7	1,202	2.1	4,819	8.6	2,961	5.3	5,757	10.3
March 1965	57,251	41,588	72.6	1,168	2.0	4,964	8.7	3,271	5.7	6,260	10.9
March 1966	58,092	42,060	72.4	1,165	2.0	4,944	8.5	3,292	5.7	6,631	11.4
March 1967	58,845	42,489	72.2	1,185	2.0	5,117	8.7	3,408	5.8	6,646	11.3
March 1968	60,446	43,267	71.6	1,194	2.0	5,273	8.7	3,661	6.1	7,049	11.7
March 1969	61,805	43,818	70.9	1,217	2.0	5,381	8.7	3,893	6.3	7,496	12.1
March 1970	62,875	44,406	70.6	1,209	1.9	5,493	8.7	3,971	6.3	7,794	12.4
March 1971	64,374	44,704	69.4	1,250	2.0	5,869	9.1	4,385	6.8	8,166	12.7
March 1972	66,676	45,724	68.6	1,331	2.0	6,108	9.2	4,839	7.3	8,674	13.0
March 1973	68,251	46,297	67.8	1,432	2.1	6,535	9.6	5,129	7.5	8,858	13.0
March 1974	69,859	46,806	67.0	1,397	2.0	6,706	9.6	5,659	8.1	9,291	13.3
% Change since 1960:	32.3	19.2		13.8		51.2		108.4		79.4	

*Revised in 1965 for consistency with revised estimates of the population.

Sources: "Household and Family Characteristics" Series P-20, nos. 233, 246, 258, and 276. *Current Population Reports, Population Characteristics.* Washington, D.C.: U.S. Bureau of the Census.
Abbott L. Ferriss, "Indicators of Trends in Status of American Women," New York: Russell Sage Foundation, 1971.

FIGURE 23



Number of divorces and estimated number of children involved in divorce and remarriage (in thousands), 1953–1975.[22]

TABLE 16

TRENDS IN MARITAL DISSOLUTION BY RACE AND PRESENCE OF CHILDREN, 1960-1970[23]

	Percentage of All Ever-Married Women		Percentage Point Change	Percent Increase in Number of Women,
	1960	1970	1960-1970	1960-70
Divorced				
White	3.4	4.8	+1.4	59
Nonwhite	4.6	7.1	+2.5	66
Separated				
White	1.6	1.9	+0.3	34
Nonwhite	10.7	12.5	+1.8	26
Widowed				
White	14.6	15.7	+1.1	23
Nonwhite	17.8	18.6	+0.8	13
Divorced with Children				
White	1.2	1.8	+0.6	72
Nonwhite	1.6	3.1	+1.5	108
Separated with Children				
White	0.7	0.9	+0.2	50
Nonwhite	5.0	7.0	+2.0	51
Widowed with Children				
White	1.1	1.1	0.0	14
Nonwhite	2.5	2.9	+0.4	26

68 percent of all families earning under $4,000 with children under 18 were headed by females. In the mid-range of $8,000 to $10,000 about 18 percent of all such families were headed by females. But when one reaches somewhat higher income ranges--$10,000 to $12,000 or $12,000 to $15,000, only about five percent of such families are single female headed families.

One can see the same kind of effect illustrated in a different perspective by dividing all households into five categories by the size of income and relating this to the marital status and sex of the household head (Tables 17 and 18).

The effects of an unconvenional, broken and disrupted family on income is quite dramatically shown in Table 17. For all households headed by males the median income was $12,965 in 1973, a shade above the average for all families ($12,051). However, for female-headed families (headed by a full-time female working head), income was $8,795. The disparities are even more dramatic when one makes the racial comparisons. The average median income for male-headed households was $13,253; the full-time, white, working female had an income of $9,516. This is roughly comparable to the average income for families headed by a Black working male ($9,549). For Black female, full-time working heads, the median was $7,095.

If one views figures for 1973 for mean rather than median incomes, the differences are even more striking, as shown in Table 20.

TABLE 17. FIFTHS OF HOUSEHOLDS BY SIZE OF MONEY INCOME, BY SELECTED CHARACTERISTICS: 1969 AND 1974[24]

(Households as of March of the following year)

Selected characteristics	Total		Household income											
			Lowest fifth		Second fifth		Third fifth		Fourth fifth		Highest fifth		Top 5 percent	
	1974	1969	1974	1969	1974	1969	1974	1969	1974	1969	1974	1969	1974	1969
MARITAL STATUS AND SEX OF HEAD														
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male head	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Married, wife present	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Married, wife absent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Separated	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Widowed	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Divorced	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Single	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Female head	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Married, husband absent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Separated	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
In Armed Forces	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	-	-	-	-
Widowed	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Divorced	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Single	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

- Represents zero. X Not applicable.

[1] Data for 1974 are not strictly comparable with those for 1969. For details see page [illegible] of Series P-60, No. [illegible]

[2] The lower limits for [illegible] of head are [illegible] respectively for 1974 and [illegible] for 1969.

TABLE 18. HOUSEHOLDS BY TOTAL MONEY INCOME IN 1969 AND 1974, IN CONSTANT 1974 DOLLARS, BY SELECTED CHARACTERISTICS[25]

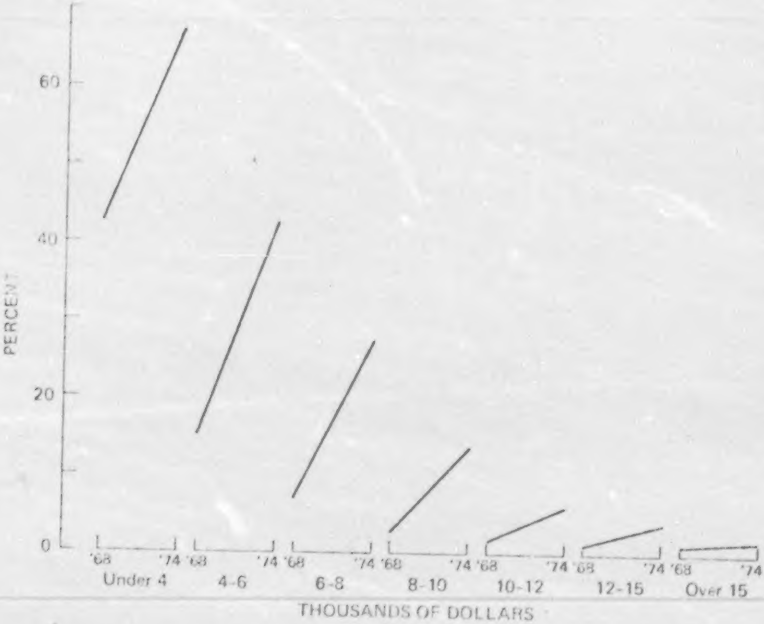
(Households as of March of the following year)

Selected characteristics	Total		Household income											
			Under $5,000		$5,000 to $9,999		$10,000 to $14,999		[illegible]		[illegible]		[illegible] and over	
	1974	1969	1974	1969	1974	1969	1974	1969	1974	1969	1974	1969	1974	1969
MARITAL STATUS AND SEX OF HEAD														
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Male head	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Married, wife present	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Married, wife absent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Separated	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Widowed	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Divorced	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Single	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Female head	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Married, husband absent	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Separated	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
In Armed Forces	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Other	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	-	[illegible]	-	-	-	-
Widowed	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Divorced	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Single	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

- Represents zero.

[1] Data for 1974 are not strictly comparable with those for 1969. For details see page [illegible] of Series P-60, No. [illegible]

FIGURE 24



Female-headed families as a percentage of all family heads under 65 with children under 18 by income in previous year, 1968–1974.[26]

TABLE 19. —MEDIAN INCOME OF FAMILIES, BY TYPE OF FAMILY AND RACE, 1973[27]

Selected characteristics	Median income of all families	Median income of families headed by year-round full-time workers
All families	$12,051	$14,614
Type of family (all races)		
Male head	12,965	14,965
Married, wife present	13,028	15,000
Wife in paid labor force	15,237	17,292
Wife not in paid labor force	11,418	13,675
Other marital status	10,742	13,453
Female head	5,797	8,795
Type of family (head of household white)		
Male head	13,253	15,305
Married, wife present	13,297	15,353
Wife in paid labor force	15,654	17,586
Wife not in paid labor force	11,716	13,911
Other marital status	11,585	13,907
Female head	6,560	9,516
Type of family (head of household black)		
Male head	9,549	11,730
Married, wife present	9,729	11,776
Wife in paid labor force	12,266	13,817
Wife not in paid labor force	7,148	9,297
Other marital status	6,767	10,415
Female head	4,226	7,095

Table 20.--**MEAN FAMILY INCOME IN 1975 OF FAMILIES WITH ONE OR MORE OWN CHILDREN UNDER 18 YEARS OLD, BY TYPE OF FAMILY**

Age of Head	Husband-Wife Families	Single-Parent Families	
		Male-Headed	Female-Headed
Under 25	$ 9,664	(B)	$3,871
25-44	17,008	$12,427	6,900
45-64	20,823	14,134	8,685

Source: "Money Income in 1975 of Families and Persons in the U. S.," Current Population Reports, Series P-60, No. 105, table 25, Washington, D.C.: U. S. Bureau of the Census. Revised:4-28:77:MHenson

B Base less than 75,000.

As a general conclusion, female-headed households are in poverty. Presumably, any factors leading to the dissolution in the family or promoting single-parentness will carry more children into poverty. A recent HEW report points out that "...absence of the father from the home was the basis of eligibility for 83 percent of the children, an increase of three percentage points over 1973. About three-fourths of AFDC families were headed by a woman."[29]

The impacts of divorce on family poverty can be appreciated from a recent study covering a national sample of 5,000 families for the years 1968-73, at the Urban Institute by Sawhill, Jones and Gordon:

- About 40 percent of all divorced, separated, or single women do not receive any financial assistance from the father of their children. The remainder receive help only irregularly and in very small amounts.
- Less than 1/5th of men earning less than $3,710 (in 1973) ever pay anything.
- Three-fourths of men with incomes above $11,000 contribute to the children's upkeep. For men earning over $7,000 child-support averages 12 percent of their income per year.
- For absent fathers with a history of rendering support, the average payment per family was about $2,000 in 1973.
- The national sample of 5,000 families in 1973, 55 percent of eligible families received nothing, 20 percent received less than $1,000; 14 percent less than $3,000; 9 percent less than $5,000, and 2 percent $5,000 or more.

TABLE 21

Percent of Children Under 18 Years Old in Poverty Families: 1967 to 1976[30]

	White		Black and All Other Races		Black	
	Number Below Poverty	Percent Below Poverty	Number Below Poverty	Percent Below Poverty	Number	Percent
1967	6,729*	11.3	4,698*	44.9	4558	47.4
1968	6,373	10.7	4,366	41.6	4188	43.1
1969	5,667	9.7	3,834	37.7	3677	39.6
1970	6,138	10.5	4,097	39.6	3922	41.5
1971	6,341	10.9	4,003	38.7	3836	40.7
1972	5,784	10.1	4,298	41.3	4025	42.7
1973	5,462	9.7	3,991	38.3	3822	40.6
1974**	6,079	11.0	3,888	37.1	3713	39.6
1975	6,748	12.5	4,134	38.9	3884	41.4

* In thousands, in specified groups.
**Based on Revised Methodology
Beginning with 1969, data are based on 1970 census population controls; therefore, not strictly comparable to date for earlier years.

Source: 1)Bureau of the Census. Characteristics of the Low-Income Population: 1973 (Advance Report). Table 1.

2) Bureau of the Census. Money Income and Poverty Status of Families and Persons in the United States: 1974 (Advance Report). Table 17.

F. Children in Poverty

A direct comparison can be made of the percentage of children living in poverty level families in 1967 and 1975. Considering white families in 1967, 11.3 percent were in poverty; in 1975, 12.5 percent (Table 21).

When one looks at Blacks during comparable periods, 44.9 percent of children below age 18 were living in poverty level families, whereas in 1975, 41.4 percent were.

Such a table is cause for optimism and pessimism. The clear and unequivocal improvement in incomes for Black and white families is paralleled by a slight shrinkage in the relative difference between the white and Black percentages of children in poverty through 1974. The gap widened again in 1975. The fact remains, however, that on a percentage basis, somewhat over three times as many Black children are now living in poverty families and that is two out of every five Black children.

These data are illustrated graphically in Figures 25 and 26. The details are given in Table 22. The income comparisons between Blacks and whites have been generally established and widely recognized.

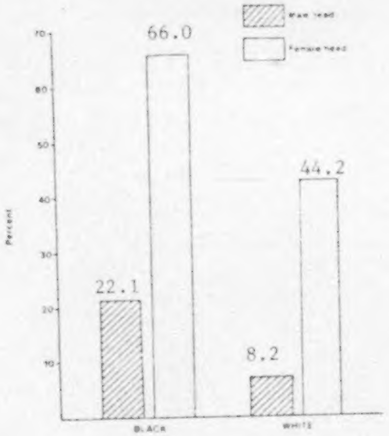


FIGURE 25

Percent of Children Under 18 Years Old in Poverty Families: 1975[31]

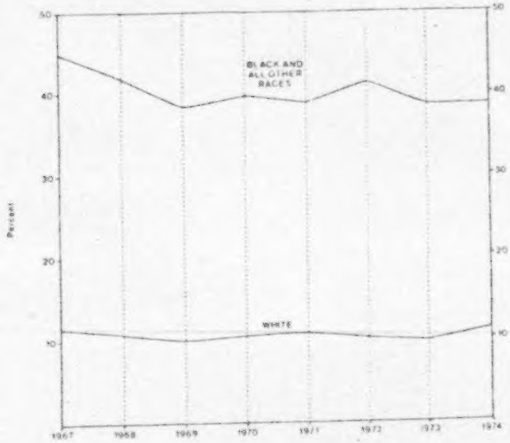


FIGURE 26

Percent of Children Under 18 Years Old in Poverty Families: 1967 to 1975[32]

TABLE 22

Percent of Children Under 18 Years Old in Poverty Families: 1974[33]

	Black			White		
	Number: All Income Levels	Number Below Poverty Level	Percent Below Poverty Level	Number: All Income Levels	Number Below Poverty Level	Percent Below Poverty Level
Male-Headed Families	5,314*	1,151*	21.7	49,054*	3,500*	7.1
Female-Headed Families	4,062	2,668	65.7	6,294	2,680	42.6

*Number in thousands, in specified group.

G. The Recent Census Survey of Income and Education

Education Amendments of 1974, in accordance with the official definitions in Title I of the Elementary and Secondary School Act of 1965, require that the Secretary of Commerce in collaboration the Secretary of Health, Education and Welfare conduct a survey to determine the poverty status. A special survey of each state was taken

in the spring of 1976. The data are shown in Table 23. Based on these estimates, of the 49,211,000 children aged 5-17 in the United States, 7,132,000 are at the poverty level. These figures are somewhat at odds with the 1970 census data, both in terms of total numbers (568,000 fewer), as well as in details for 25 states (Table 24). However, overall, the pattern is clear and in agreement. Since however, this survey was conducted for purposes of implementing a funding formula, the detailed reliability becomes particularly critical. According to the Secretaries' (DOC and HEW) cover letter, the tables are preliminary and subject to further evaluation.

Since poverty is not an absolute but a relative concept, alternative poverty counts have been proposed and utilized by government. The report, Measures of Poverty, April 1976, suggests a modified schedule as shown in Table 25. The details of the poverty level cut-off proposed in 1975 (by sex of the family head, size of family, number of children, farm and non-farm residence) are shown in Table 26.

They also apply across these demographic family categories. On a percentage basis, more Black children than white children are in poverty. All negative family effects are enhanced for single-parent families, and on a metropolitan/nonmetropolitan basis for Blacks. As Black income is substantially less than white, race becomes a correlate with poverty and single-parent families. (Figure 27).

An interesting comparison and distribution of children in poverty can be seen by the comparison of these numbers as displayed in Table 27. While the differences are slight, they are not all in the same direction between the current and the alternative poverty levels.

H. The Deferred Marriage

Returning to Figure 18, the rate of first marriage can be seen for women in significant age groups. It is quite clear from these data that there is a tendency toward deferred marriage on the part of younger women. However, when one compares this situation with the expected

TABLE 23. PRELIMINARY ESTIMATES OF CHILDREN 5 TO 17 YEARS OLD IN FAMILIES BY STATE, BY POVERTY STATUS: 1975[34]

State	Total in Families	In Families Below Poverty Level				
		Number			Poverty Rate	
		Total	Standard Error		Percent Poor	Standard Error
			Number	Percent (C.V.)		
UNITED STATES	49,211,000	7,132,000	123,800	1.7	14.5	0.3
Alabama	858,990	136,210	15,673	11.5	15.9	1.8
Alaska	95,590	6,150	952	15.5	6.4	1.0
Arizona	549,200	92,430	8,745	9.5	16.8	1.6
Arkansas	495,910	106,060	10,269	9.7	21.4	2.1
California	4,705,530	648,050	52,570	8.1	13.8	1.1
Colorado	600,390	64,090	7,632	11.9	10.7	1.3
Connecticut	704,150	59,190	5,675	9.6	8.4	0.8
Delaware	137,610	14,300	1,607	11.2	10.4	1.2
District of Columbia	144,610	22,740	2,738	12.0	15.7	1.9
Florida	1,768,410	382,550	33,000	8.6	21.6	1.9
Georgia	1,193,880	254,660	25,543	10.0	21.3	2.1
Hawaii	204,480	19,540	2,131	10.9	9.6	1.0
Idaho	205,130	22,530	1,690	7.5	11.0	0.8
Illinois	2,570,280	389,150	27,314	7.0	15.1	1.1
Indiana	1,257,960	120,440	11,218	9.3	9.6	0.9
Iowa	678,080	53,270	5,735	10.8	7.9	0.8
Kansas	499,660	42,750	5,184	12.1	8.6	1.0
Kentucky	793,940	170,230	16,497	9.7	21.4	2.1
Louisiana	961,050	219,900	18,593	8.5	22.9	1.9
Maine	253,130	38,690	3,658	9.5	15.3	1.4
Maryland	974,980	104,150	10,954	10.5	10.7	1.1
Massachusetts	1,322,660	123,540	12,280	9.9	9.3	0.9
Michigan	2,230,860	251,710	19,549	7.8	11.3	0.9
Minnesota	958,470	87,340	9,162	10.5	9.1	1.0
Mississippi	596,000	194,340	13,840	7.1	32.6	2.3
Missouri	1,070,580	157,040	15,870	10.1	14.7	1.5
Montana	181,960	22,760	2,079	9.1	12.5	1.1
Nebraska	356,640	36,100	4,004	11.1	10.1	1.1
Nevada	143,320	15,770	1,389	8.8	11.0	1.0
New Hampshire	197,000	20,310	1,704	8.4	10.3	0.9
New Jersey	1,672,110	193,800	15,007	7.7	11.6	0.9
New Mexico	300,010	77,940	5,500	7.1	26.0	1.8
New York	3,992,870	524,020	42,785	8.2	13.1	1.1
North Carolina	1,244,490	221,210	24,445	11.1	17.8	2.0
North Dakota	155,410	17,820	2,059	11.6	11.5	1.3
Ohio	2,521,070	293,650	23,233	7.9	11.6	0.9
Oklahoma	596,900	86,990	10,213	11.7	14.6	1.7
Oregon	511,540	42,760	4,658	10.9	8.4	0.9
Pennsylvania	2,605,050	329,020	25,514	7.8	12.6	1.0
Rhode Island	205,790	21,520	2,166	10.1	10.5	1.1
South Carolina	692,700	165,700	14,510	8.8	23.9	2.1
South Dakota	164,830	21,660	2,969	13.7	13.1	1.8
Tennessee	954,940	195,680	19,346	9.9	20.5	2.0
Texas	2,890,460	591,720	37,255	6.3	20.5	1.3
Utah	316,310	25,270	2,724	10.8	8.0	0.9
Vermont	112,260	20,020	1,548	7.7	17.8	1.4
Virginia	1,138,750	155,750	17,012	10.9	13.7	1.5
Washington	809,070	81,290	8,245	10.1	10.0	1.0
West Virginia	401,560	76,020	7,455	9.8	18.9	1.9
Wisconsin	1,124,090	105,950	10,494	9.9	9.4	0.9
Wyoming	89,990	7,740	765	9.9	8.6	0.9

Source: Survey of Income and Education
U.S. Bureau of the Census

TABLE 24

NUMBER, PERCENT DISTRIBUTION, AND POVERTY RATES OF POOR CHILDREN 5 TO 17 YEARS OLD IN FAMILIES, BY STATE: 1970 CENSUS AND SIE[35]

Divisions, Regions, and States	Poor children 5 to 17 years old				Percent of United States poor		Poverty rate	
	1970 Census		SIE					
	Number	Standard error	Number	Standard error	1970 Census	SIE	1970 Census	SIE
UNITED STATES, TOTAL..	7,700,368	9,799	*7,132,000	123,330	100.00	100.00	14.8	14.5
NORTHEAST.......	1,247,028	3,797	1,330,110	52,120	16.21	*18.64	10.5	*12.0
New England...........	260,121	1,734	283,270	14,193	3.38	* 3.96	8.9	*10.1
Maine..............	36,308	636	38,690	3,553	0.47	0.54	14.2	15.3
New Hampshire......	14,286	402	* 20,310	1,724	0.19	* 0.28	7.7	*10.3
Vermont............	13,062	383	* 20,020	1,549	0.17	* 0.28	11.4	*17.9
Massachusetts......	116,900	1,151	123,540	12,230	1.52	1.73	8.4	9.3
Rhode Island.......	24,482	525	21,520	2,755	0.32	0.30	11.0	10.5
Connecticut........	55,083	790	59,190	5,375	0.72	0.83	7.2	8.4
Middle Atlantic........	986,907	3,378	1,046,840	50,573	12.82	*14.65	11.0	12.7
New York..........	526,402	2,410	524,020	42,755	6.84	7.35	12.2	13.1
New Jersey.........	155,690	1,323	193,800	15,227	2.02	* 2.72	8.7	*11.6
Pennsylvania.......	304,815	1,852	329,020	25,314	3.96	4.61	10.5	12.6
NORTH CENTRAL.....	1,539,350	4,218	1,576,590	46,385	20.00	*22.12	10.8	11.6
East North Central....	1,023,717	3,440	*1,160,900	42,287	13.29	*16.29	9.7	*12.0
Ohio...............	273,542	1,757	293,650	23,233	3.55	4.12	9.8	11.6
Indiana............	123,484	1,182	120,440	11,218	1.60	1.69	9.0	9.6
Illinois...........	302,311	1,845	* 389,150	27,314	3.93	* 5.46	10.7	*15.1
Michigan...........	220,485	1,581	251,710	19,549	2.86	* 3.53	9.1	*11.3
Wisconsin..........	103,995	1,091	105,950	10,434	1.35	1.49	8.7	9.4
West North Central....	515,633	2,441	* 415,980	19,732	6.71	* 5.83	12.1	*10.7
Minnesota..........	98,936	1,056	87,340	9,152	1.28	1.22	9.5	9.1
Iowa...............	72,000	901	* 53,270	5,735	0.94	* 0.75	9.8	* 7.9
Missouri...........	172,955	1,382	157,040	15,570	2.25	2.20	14.8	14.7
North Dakota.......	27,354	550	* 17,820	2,059	0.35	* 0.25	15.7	*11.5
South Dakota.......	33,815	609	* 21,660	2,359	0.44	* 0.30	18.3	*13.1
Nebraska...........	45,952	717	36,100	4,234	0.60	0.51	12.0	10.1
Kansas.............	64,621	852	* 42,750	5,784	0.84	* 0.60	11.5	* 8.6
SOUTH.........	3,815,961	6,642	*3,098,210	75,523	49.55	*43.43	23.5	*19.5
South Atlantic........	1,605,208	4,308	*1,397,080	52,726	20.85	*19.58	20.7	*18.2
Delaware...........	17,372	441	14,300	1,537	0.23	0.20	12.0	10.4
Maryland...........	116,951	1,145	104,150	10,354	1.52	1.46	11.5	10.7
District of Columbia..........	37,193	639	* 22,740	2,739	0.48	* 0.32	23.2	*15.7
Virginia...........	214,357	1,530	* 155,750	17,312	2.78	* 2.18	18.2	*13.7
West Virginia......	106,359	1,073	* 76,020	7,455	1.38	* 1.07	24.3	*18.9
North Carolina.....	312,545	1,849	* 221,210	24,445	4.06	* 3.10	24.0	*17.8
South Carolina.....	206,985	1,476	165,700	14,310	2.69	2.32	29.1	*23.9
Georgia............	293,671	1,771	254,660	25,543	3.82	3.57	28.4	21.3
Florida............	299,575	1,812	382,550	33,200	3.89	* 5.36	13.9	21.6
East South Central....	987,444	3,379	* 696,460	32,329	12.82	* 9.76	29.3	*21.7
Kentucky...........	208,462	1,495	170,230	16,497	2.71	2.39	25.1	21.8
Tennessee..........	245,157	1,629	195,680	19,346	3.18	2.74	24.8	*20.5
Alabama............	272,146	1,710	* 136,210	15,573	3.53	* 1.91	29.5	*15.9
Mississippi........	261,679	1,639	* 194,340	13,340	3.40	* 2.72	41.5	*32.6
West South Central...	1,223,309	3,761	*1,004,670	42,777	15.88	*14.09	23.9	*20.3
Arkansas...........	155,135	1,284	* 106,060	10,259	2.01	* 1.49	31.6	*21.8
Louisiana..........	308,850	1,812	* 219,900	18,593	4.01	* 3.08	30.1	*22.9
Oklahoma...........	122,548	1,158	* 86,990	10,213	1.59	* 1.22	19.5	*14.6
Texas..............	636,776	2,637	591,720	37,255	8.27	8.30	21.5	20.5
WEST........	1,098,029	3,761	1,126,320	94,239	14.26	*15.80	12.4	12.9
Mountain.......... ...	336,281	1,972	328,530	13,314	4.37	4.61	14.7	13.8
Montana............	24,998	528	22,760	2,079	0.32	0.32	12.9	12.5
Idaho..............	23,716	514	22,530	1,590	0.31	0.32	12.0	11.0
Wyoming............	10,054	335	7,740	755	0.13	0.11	11.2	* 8.6
Colorado...........	71,254	893	64,090	7,532	0.93	0.90	12.3	10.7
New Mexico.........	80,559	924	77,940	6,530	1.05	1.09	26.3	26.0
Arizona............	84,014	960	92,430	7,745	1.09	1.30	17.5	15.8
Utah...............	30,796	588	25,270	2,724	0.40	0.35	10.0	* 5.0
Nevada.............	10,890	351	* 15,770	2,389	0.14	* 0.22	8.5	*11.0
Pacific...............	761,748	2,957	797,790	52,414	9.89	11.19	11.5	12.6
Washington.........	80,172	949	81,290	6,245	1.04	1.14	9.3	10.0
Oregon.............	53,953	779	42,760	4,553	0.70	0.60	10.3	* 8.4
California.........	595,765	2,556	648,050	52,570	7.74	9.09	12.1	13.3
Alaska.............	12,393	370	* 6,150	952	0.16	* 0.09	14.6	* 6.4
Hawaii.............	19,465	468	19,540	2,131	0.25	0.27	9.7	9.6

*An asterisk (*) preceding the SIE data indicates statistically significant change at the 95 percent confidence level from the 1970 census data.

TABLE 25

1975 CUTOFF LEVELS FOR TABLES SHOWING ALTERNATIVE MEASURES OF POVERTY[36]

Universe	Current poverty level			Alternate poverty level		
	Below current poverty level (1)	Below 125% of current poverty level (2)	Below 50% of 4-person median family income 1/ (3)	Below alternate poverty level 2/ (4)	Below 125% of alternate poverty level (5)	Below 50% of 4-person median family income 3/ (6)
	Full poverty matrix (See Table 2)	125% of Column (1)	See footnote 1	1 person: Under 65.... $ 3,848 65 and over... 3,610 2 persons: Head under 65.. 4,810 Head 65 & over.. 4,512 3 persons....... 5,260 4 persons .... 6,610 5 persons .... 7,923 6 persons .... 9,549 7 persons ..... 10,618 8 persons ..... 11,512 9 persons ..... 12,566 10 persons .... 13,690 11 or more 15,194	125% of Column (4)	1 person: Under 65 .....$4,613 65 and over... 4,328 2 persons: Head under 65.. 5,766 Head 65 & over.. 5,409 3 persons ...... 6,306 4 persons ...... 7,924 3/ 5 persons ...... 9,498 6 persons ..... 11,447 7 persons ..... 12,729 8 persons ..... 13,800 9 persons ..... 15,064 10 persons .... 16,411 11 or more 18,214

1/ Poverty line for four-person family taken as half the median for a four-person husband-wife family with two children, estimated at $15,373 for 1975. Other sizes computed using implicit equivalence scale based on full current poverty matrix.

2/ Developed by Mollie Orshansky of SSA.

3/ Poverty line for four-person family taken as half the median for a four-person family equal to $15,848 for 1975. Criteria for other family sizes computed using implicit equivalence scale based on alternate poverty thresholds.

TABLE 26

—POVERTY CUTOFFS IN 1975 BY SEX OF HEAD, SIZE OF FAMILY, AND NUMBER OF RELATED CHILDREN UNDER 18 YEARS OLD, BY FARM-NONFARM RESIDENCE 37

Size of Family Unit	Number of Related Children Under 18 Years Old						
	None	1	2	3	4	5	6
NONFARM							
Male Head							
1 Person (Unrelated Individual):							
Under 65 years	$2,902						
65 Years and Over	2,608						
2 Persons:							
Head Under 65 Years	3,629	$4,065					
Head 65 Years and Over	3,258	4,065					
3 Persons	4,224	4,361	$4,610				
4 Persons	5,569	5,651	5,456	$5,732			
5 Persons	6,721	6,802	6,584	6,418	$6,556		
6 Persons	7,709	7,734	7,571	7,406	7,197	$7,297	
7 or More Persons	9,709	9,792	9,599	9,435	9,217	8,986	$8,805
Female Head							
1 Person (Unrelated Individual):							
Under 65 Years	$2,635						
65 Years and Over	2,574						
2 Persons:							
Head under 65 Years	3,352	$3,660					
Head 65 Years and Over	3,217	3,660					
3 Persons	4,068	[illegible]	$4,307				
4 Persons	5,347	5,540	5,514	$5,456			
5 Persons	6,419	6,612	6,591	6,529	$6,309		
6 Persons	7,488	7,625	7,571	7,515	7,269	$7,048	
7 or More Persons	9,407	9,545	9,517	9,435	9,189	8,997	$8,558
FARM							
Male Head							
1 Person (Unrelated Individual):							
Under 65 Years	$2,466						
65 Years and Over	2,216						
2 Persons:							
Head Under 65 Years	3,084	$3,454					
Head 65 Years and Over	2,769	3,454					
3 Persons	3,592	3,707	$3,918				
4 Persons	4,734	4,805	4,637	$4,872			
5 Persons	5,713	5,782	5,595	5,455	$5,572		
6 Persons	6,552	6,576	6,436	6,295	6,109	$6,202	
7 or More Persons	8,254	8,324	8,161	8,020	7,835	7,534	$7,485
Female Head							
1 Person (Unrelated Individual):							
Under 65 Years	$2,282						
65 Years and Over	2,187						
2 Persons:							
Head Under 65 Years	2,850	$3,111					
Head 65 Years and Over	2,735	3,111					
3 Persons	3,473	3,310	$3,661				
4 Persons	4,547	4,708	4,687	$4,637			
5 Persons	5,455	5,620	5,595	5,549	$5,363		
6 Persons	6,366	6,482	6,436	6,399	6,179	$5,991	
7 or More Persons	7,995	8,115	8,090	8,020	7,811	7,647	$7,274

SOURCE: U.S. Bureau of the Census, Current Population Survey.

FIGURE 35

Cohort Labor Force Participation: Men Born 1906-1915; Women Born 1886-1975 [8]

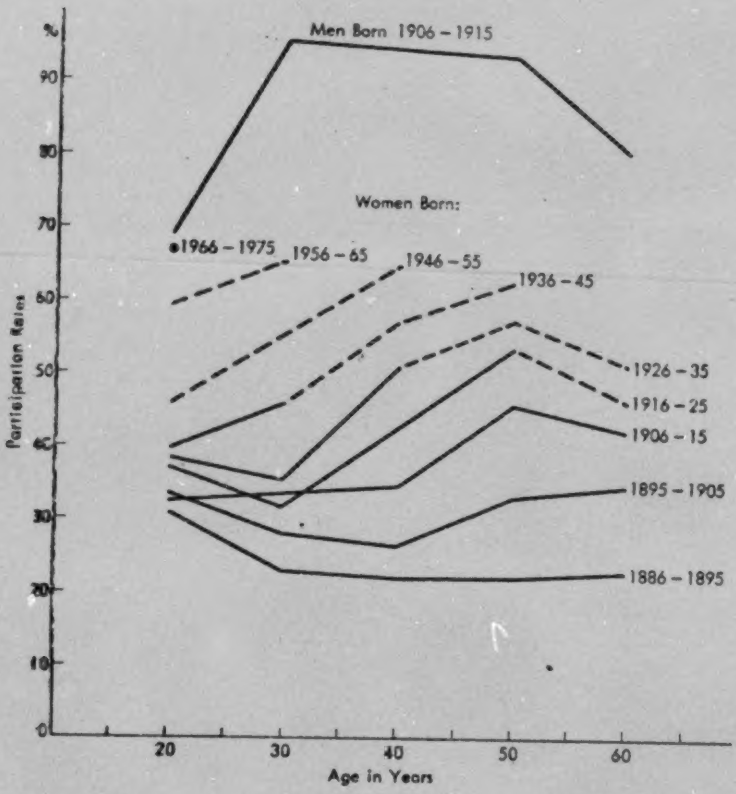
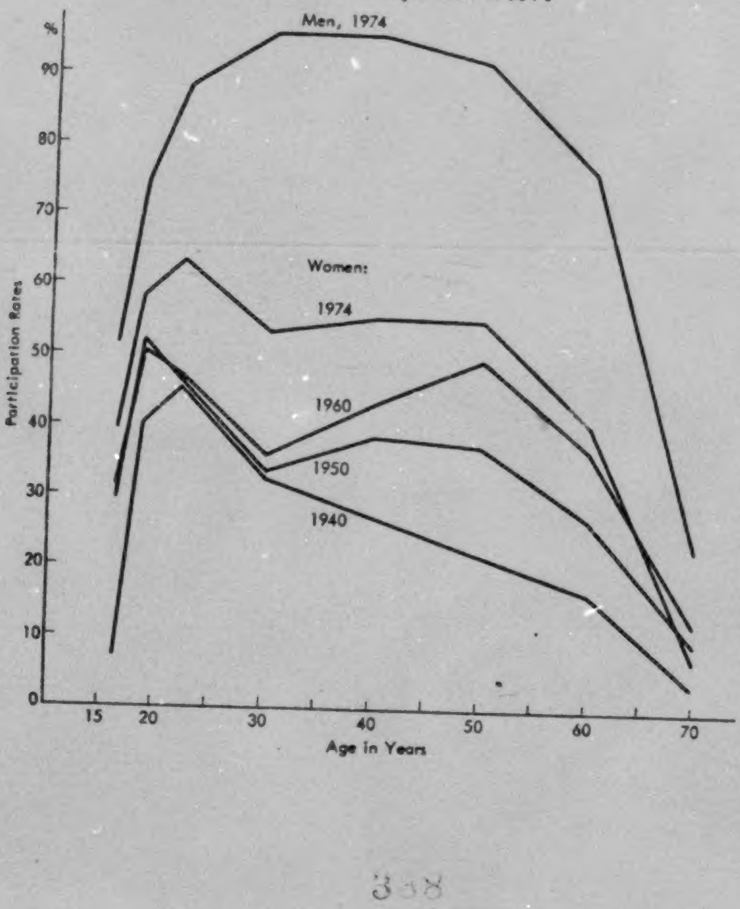


FIGURE 36

Labor Force Participation Rates by Age for Women in 1940, 1950, 1960, and 1974–and for Men in 1974[9]



c. Occupations for Women

1)

Clerical	Service Workers	Professionals	Operative (factory)
35%	21%	15%	13%

The participation of women in various occupational categories is not the same as for men (Table 32). Women in 1974 were dominant (more than 50%) in service and finance with 40% more working in trade and government jobs.

2) Prior to World War II, most women in the labor force were either:

- o single, middle class, white collar workers who worked until they married, or
- o poor, single or married, working in factories or domestic service.

After the War, the rolls of women workers were increased by the addition of married, middle-class women. Between 1960 and 1972, the number of Black female clerical workers increased from 262,000 to 976,000 (from 9 to 24 percent of all Black women workers (Figure 37 .

3) Economic need is a primary reason for women to work (Figure 41).

- o Participation also increased with the husband's work (Figure 38 and Table 33, but more important, are the details of the effects of education and the number of children.
- o Participation also increased with the level of education (Table 33).
- o Participation also increased with the age of the children (Figure 40b and Table 33).

4. Participation of women with children has steadily increased since 1965 (Figure 40a).

5. Work participation also seems to be increasing independently of the above factor, probably for more diverse social reasons (**Figure** 39).

6. Race Makes a Difference

   - o Participation of Black women with children is higher than for white women with the same number of children (Figure 40b).
   - o Between 1960 and 1972, the number of Black female clerical workers increased from 262,000 to 976,000 (from 9 to 24 percent of all Black women workers).
   - o Other differences between minority women and white women in occupation groups are diminishing (Figure 37).

d. Unemployment

1) In 1973, 2.4 million or 48 percent of all unemployed were women (Figure 42).

2) Unemployment rate for women was 6.7% - 10.7% for Black women,
and 6.1% for white women;
for men it was 4.8%.

The unemployed proportion for women is increasing.

3) Rate of unemployment for female-headed household is 6.4%;
Rate of unemployment for male heads of families is 2.7%.

TABLE 32

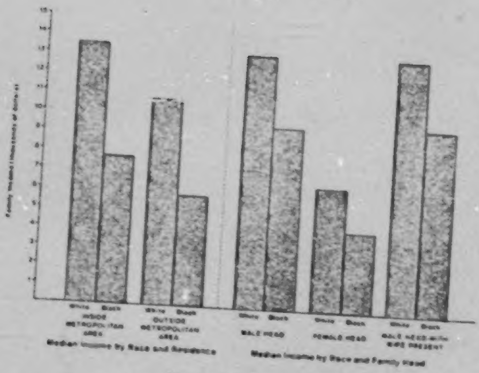
-MAJOR OCCUPATION GROUPS OF EMPLOYED WOMEN, 1959, 1964, 1969, AND APRIL 1974[10]

(Women 16 years of age and over)

Major occupation group	Number (in thousands)				Percent distribution			
	April 1974	1969	1964	1959	April 1974	1969	1964	1959
Total	33,265	29,084	23,831	21,164	100.0	100.0	100.0	100.0
Professional, technical workers	5,179	4,018	3,107	2,558	15.6	13.8	13.0	12.1
Managers, administrators	1,654	1,261	1,108	1,078	5.0	4.3	4.6	5.1
Sales workers	2,260	2,017	1,730	1,661	6.8	6.9	7.3	7.8
Clerical workers	11,463	9,975	7,436	6,322	34.5	34.3	31.2	29.9
Craft and kindred workers	476	339	260	213	1.4	1.2	1.0	1.0
Operatives	4,344	4,489	3,643	3,258	13.1	15.4	15.3	15.4
Nonfarm laborers	339	146	88	100	1.0	.5	.4	.5
Service workers	7,091	6,271	5,694	4,965	21.3	21.6	23.9	23.5
Private household	1,290	1,592	1,995	1,915	3.9	5.5	8.4	9.0
Other	5,800	4,679	3,699	3,050	17.4	16.1	15.5	14.4
Farm workers	460	569	778	1,009	1.4	2.0	3.3	4.8

Source: Manpower Report of the President, April 1974.

FIGURE 27



Median Family Income: 1973 38

Characteristics	Median Family Income in 1975
Inside Metropolitan Areas:	
White	$15,548
Black	9,494
Outside Mtropolitan Areas:	
White	12,020
Black	6,684
Male Head:	
White	15,094
Black	11,389
Married, Wife Present: White	15,125
Black	11,526
Female Head:	
White	7,651
Black	4,898

TABLE 27

STATE SHARES OF TOTAL U.S. POOR CHILDREN AGED 5-17 YEARS: 1975[39]

STATE	Current Poverty Level			Alternate Poverty Level		
	Below Current Poverty Level	Below 125% of Current Poverty Level	Below 50% of 4-Person Median Family Income	Below Alternate Poverty Level	Below 125% of Alternate Poverty Level	Below 50% of 4-Person Median Family Income
Alabama	1.91	2.23	2.29	2.24	2.32	2.29
Alaska	0.09	0.10	0.10	0.11	0.11	0.11
Arizona	1.30	1.26	1.20	1.25	1.25	1.25
Arkansas	1.49	1.56	1.53	1.54	1.50	1.51
California	9.09	9.13	9.14	9.04	8.91	8.90
Colorado	0.90	0.78	0.80	0.77	0.83	0.82
Connecticut	0.83	0.87	0.94	0.86	0.98	0.94
Delaware	0.20	0.21	0.21	0.20	0.22	0.21
District of Col.	0.32	0.32	0.35	0.34	0.37	0.36
Florida	5.36	4.87	4.70	4.58	4.66	4.61
Georgia	3.57	3.34	3.47	3.41	3.36	3.42
Hawaii	0.27	0.28	0.29	0.30	0.29	0.30
Idaho	0.32	0.33	0.36	0.34	0.38	0.38
Illinois	5.46	4.85	4.60	5.00	4.56	4.72
Indiana	1.69	1.69	1.82	1.77	1.87	1.83
Iowa	0.75	0.82	0.82	0.84	0.96	0.98
Kansas	0.60	0.64	0.70	0.64	0.76	0.72
Kentucky	2.39	2.44	2.48	2.47	2.39	2.44
Louisiana	3.08	3.11	2.95	3.11	2.77	2.77
Maine	0.54	0.61	0.61	0.58	0.61	0.59
Maryland	1.46	1.42	1.51	1.41	1.57	1.50
Massachusetts	1.73	2.02	2.11	1.94	2.11	2.07
Michigan	3.53	3.60	3.76	3.70	3.79	3.80
Minnesota	1.22	1.41	1.44	1.44	1.58	1.59
Mississippi	2.73	2.43	2.37	2.49	2.21	2.28
Missouri	2.20	1.97	1.87	1.98	1.91	1.89
Montana	0.32	0.32	0.31	0.36	0.34	0.34
Nebraska	0.51	0.56	0.59	0.57	0.65	0.62
Nevada	0.22	0.23	0.23	0.23	0.23	0.23
New Hampshire	0.28	0.28	0.30	0.28	0.30	0.29
New Jersey	2.72	2.59	2.63	2.60	2.71	2.65
New Mexico	1.09	0.98	0.93	0.97	0.93	0.93
New York	7.35	8.10	7.97	8.12	7.60	7.69
North Carolina	3.10	3.17	3.12	3.07	3.04	3.05
North Dakota	0.25	0.24	0.24	0.26	0.26	0.26
Ohio	4.12	4.07	4.01	3.94	4.08	4.04
Oklahoma	1.22	1.33	1.32	1.37	1.29	1.28
Oregon	0.60	0.64	0.67	0.64	0.73	0.71
Pennsylvania	4.61	5.08	5.17	5.10	5.25	5.19
Rhode Island	0.30	0.28	0.30	0.27	0.32	0.31
South Carolina	2.32	2.17	2.02	2.17	2.04	2.06
South Dakota	0.30	0.30	0.33	0.34	0.36	0.35
Tennessee	2.74	2.87	2.72	2.75	2.95	2.65
Texas	8.30	7.93	7.90	8.12	8.12	8.15
Utah	0.35	0.39	0.43	0.41	0.49	0.48
Vermont	0.28	0.28	0.29	0.29	0.29	0.28
Virginia	2.18	2.16	2.13	2.05	2.17	2.17
Washington	1.14	1.06	1.10	1.06	1.12	1.10
West Virginia	1.07	1.12	1.05	1.08	1.04	1.04
Wisconsin	1.49	1.48	1.60	1.48	1.70	1.71
Wyoming	0.11	0.11	0.12	0.12	0.13	0.13

SOURCE: Survey of Income and Education

birth rates and expected likelihood of marriage, some find that the evidence is strongly in favor of a higher percentage of women than ever before being married and a higher percentage of them than ever before expecting to have children.

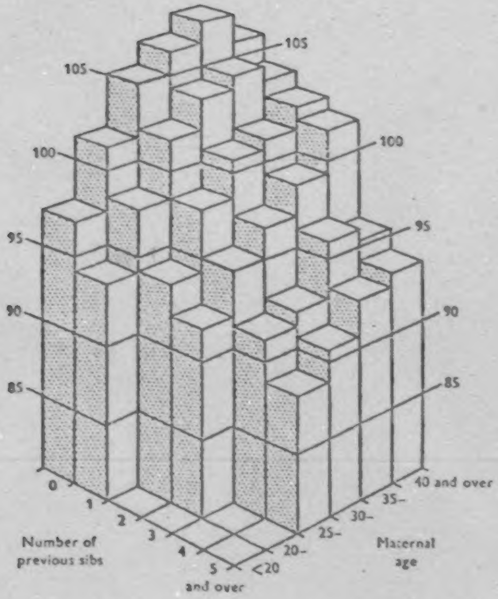
On the other hand, as marriage is deferred, it will reach a point at which the anticipation or desire to become married is decreasingly likely to be fulfilled.

The results of deferred marriage and deferred childbearing could be significant since they reflect a number of complex socially interacting factors, probably associated with greater education, higher discretionary incomes, smaller ultimate family size and hence the willingness to expend absolutely and relatively greater resources on the individual child.

A substantial body of data suggests that deferred childbearing is associated with higher school performance by the child as measured by an I.Q. related test. The research of R.G. Record on children of Aberdeen, Scotland is shown in Figure 28. Intellectual performance increased with the age of the mother and independently declined with the birth order of the child, later children being less able on the average.

While there is great deal of controversy about social, economic, cultural and political factors influencing performance on mental ability tests, the controversy should not obscure the fact that probing those relationships as dependent upon demographic changes may have significant value for educational planners.

FIGURE 28



Mean V.R. scores according to age of mother at birth of child and number of previous sibs.[40]

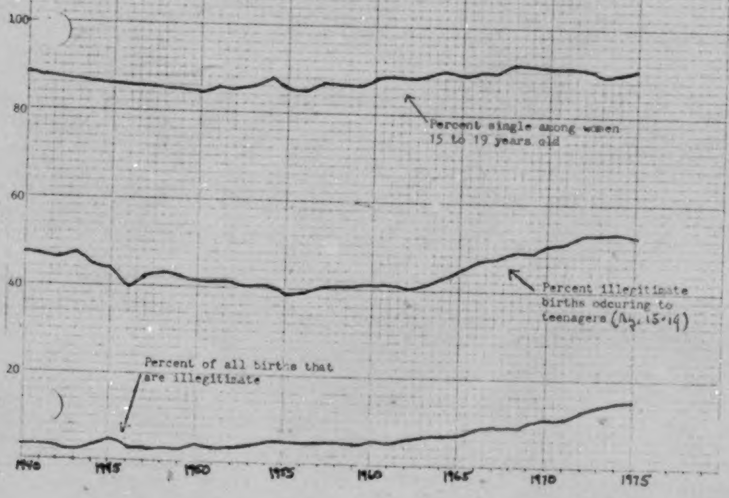
I. Illegitimacy in the United States: 1940 to 1975

The most fundamental fact regarding illegitimacy in the 35 years from 1940 to 1975 is that the number of births occurring outside of wedlock has more than quadrupled, from 90,000 in 1940 to 448,000 in 1975. At the same time the percentage of all births that are classified as illegitimate has risen from 3.8 percent to 14.3 percent (Figure 29). The number of single women 15 to 44 years increased only 38 percent between 1940 and 1975. Clearly, there has been a rise in illegitimacy out of proportion to the rise in number of single women in the population.

The age-specific rates of illegitimacy charted in Figure 30 show the underlying basis for the explosion in numbers of illegitimate births. For all 5-year age groups from 15 to 44 years of age, the rates of illegitimacy rose from the 1940's until the mid-1960's, and for the age-groups between 20 and 34 the rise was especially sharp. Except for teen-agers, however, the rates began to decline by 1965 or 1966, although they all remain at levels substantially higher than those observed in the early 1940's. Illegitimacy rates actually increased for women 15 to 19 years old by 60 percent from 1962 to 1972. By 1970, teen-age women accounted for over half of all illegitimate children, thanks to decreasing rates at older ages and increasing rates among the 15 to 19 year olds. There seems to be some correlation between this statistic and the percent single among women 15 to 19 years old (also charted in Figure 29), although the relationship does not appear to be especially strong.

Figure 29

CHANGES IN THE NUMBER OF ILLEGITIMATE BIRTHS IN THE UNITED STATES:
1940 to 1975[41]



If one were simply to speculate on the data charted in Figures 29 and 30, it certainly looks as though there was a considerable increase in sexual activity among single women in the 35 years since 1940. The drop in rates among women 20 to 44 years old probably marks the use of more effective contraceptives and their greater practical availability to single women. The fact that rates among teen-agers are not dropping may well reflect poorer understanding of the use of contraceptives as well as lesser availability than among older women.

As the number of women 15 to 19 years old decrease, the number of illegitimate births may cease to rise so rapidly as it has in the immediate past.

The illegitimacy rate is substantially higher for Blacks than whites (Figure 31 and Table 28). Since Blacks are concentrated in cities that has significant implication for big urban school systems. The increased proportion of illegitimate births is not just a big city or a minority group problem. Data form the Florida Department of Health and Rehabilitative Services show that within the state there has been a steady increase since 1960 in the percent of live births to unwed mothers; in 1950, 8 percent; in 1975, 19.4 percent of live births were to unwed mothers.

The increase is characteristic of both Blacks and whites: in 1950, 1.8 percent of white births were legitimate; in 1975, 7.5 percent. In 1950, 23.2 percent of nonwhites were illegitimate; in 1975, 53 percent were (Table 29).

FIGURE 30. Rates of Illegitimate Births Per 1,000 Unmarried Women[42]

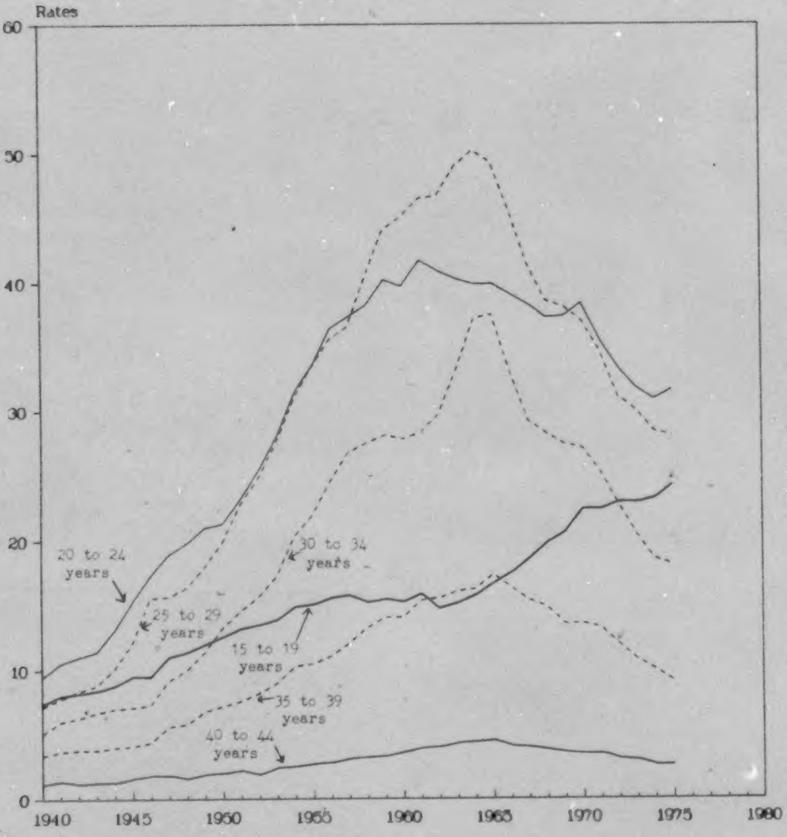
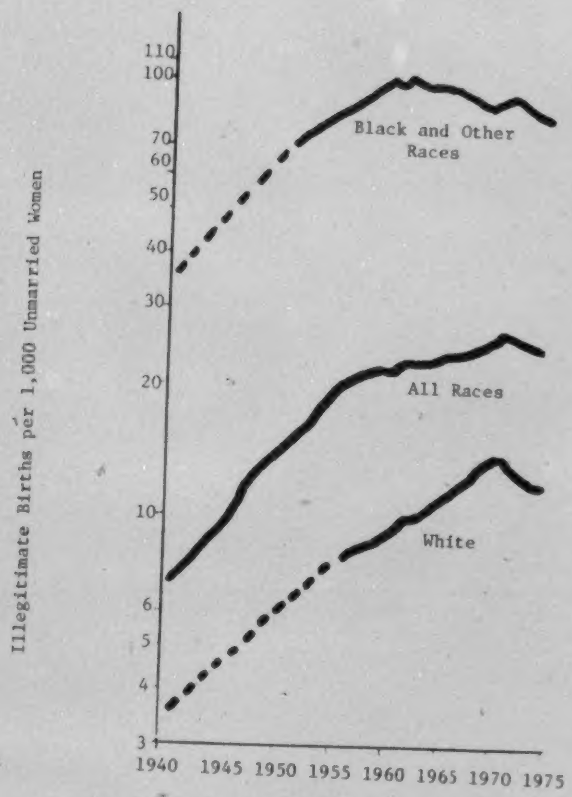


FIGURE 31

Illegitimate Birth Rates per 1,000 Unmarried Women 15 to 44 Years Old by Race: 1940 to 1974[43]



Data for Whites and Nonwhites are for 1940, 1950, and 1955 to 1974. The broken line indicates a discontinuous series.

Table 28. Estimated Number of Illegitimate Births per 1,000 Unmarried Women, By Race and Age: Single Year Data for Selected Years, 1940 to 1974, and Five Year Averages 1940-1944 to 1970-1974

Period	Age of Mother						
	15 to 44 years	15 to 19 years	20 to 24 years	25 to 29 years	30 to 34 years	35 to 39 years	40 to 44[1] years
ALL RACES							
1970 to 1974	25.1	22.8	34.0	32.2	22.9	11.9	3.1
1974	24.1	23.2	30.9	28.4	18.6	10.0	2.6
1973	24.5	22.9	31.8	30.0	20.5	10.8	3.0
1972	24.9	22.9	33.4	31.1	22.8	12.0	3.1
1971	25.6	22.4	35.6	34.7	25.3	13.3	3.5
1970	26.4	22.4	38.4	37.0	27.1	13.6	3.5
1965 to 1969	24.0	18.6	38.4	42.6	31.6	15.5	4.0
1969	25.0	20.6	37.4	38.1	27.4	13.6	3.6
1968	24.4	19.8	37.3	38.6	28.2	14.9	3.8
1967	23.9	18.6	38.3	41.4	29.2	15.4	4.0
1966	23.4	17.5	39.1	45.6	33.0	16.4	4.1
1965	23.5	16.7	39.9	49.3	37.5	17.4	4.5
1960 to 1964	22.3	15.4	40.5	47.5	31.2	15.5	4.0
1955 to 1959	20.8	15.5	37.1	38.1	25.8	12.2	3.0
1950 to 1954	16.1	13.6	25.9	25.2	16.3	8.5	2.2
1945 to 1949	11.8	10.7	18.5	15.6	9.0	5.3	1.7
1940 to 1944	8.0	8.2	11.1	8.5	6.2	3.7	1.3
WHITE							
1974	11.8	11.1	15.2	14.9	9.6	5.5	1.5
1973	11.9	10.7	15.6	16.1	10.7	5.9	1.7
1972	12.0	10.5	16.7	16.6	12.1	6.4	1.6
1971	12.5	10.3	18.9	18.6	13.3	7.2	1.9
1970	13.9	10.9	22.5	21.1	14.2	7.6	2.0
1965	11.6	7.9	22.1	24.3	16.6	4.9[2]	
1960	9.2	6.6	18.2	18.2	10.8	3.9[2]	
1955	7.9	6.0	15.0	13.3	8.6	2.8[2]	
1950	6.1	5.1	10.0	8.7	5.9	2.0[2]	
1940	3.6	3.3	5.7	4.0	2.5	1.2[2]	
BLACK[3]							
1974	86.6	95.1	111.2	82.5	52.3	24.2	6.7
1973	89.5	96.0	117.2	86.0	58.1	27.4	7.7
1972	92.2	98.8	122.0	89.7	57.7	30.2	8.5
1971	96.5	99.1	131.0	100.4	69.0	32.7	9.4
1970	95.5	96.9	131.5	100.9	71.8	32.9	10.4
1965	97.6	75.8	152.6	164.7	137.8	39.0[2]	
1960	98.3	76.5	166.5	171.8	104.0	35.6[2]	
1955	87.2	77.6	133.0	125.2	100.9	25.3[2]	
1950	71.2	68.5	105.4	94.2	63.5	20.0[2]	
1940	35.6	42.5	46.1	32.5	23.4	9.3[2]	

---

[1] Rates computed by relating illegitimate births to mothers aged 40 years and over to unmarried women aged 40 to 44 years.

[2] Rates computed by relating illegitimate births to mothers aged 35 years and over to unmarried women aged 35 to 44 years.

[3] Prior to 1970 data are for Black and all other races except White.

TABLE 29

Percent of Resident Live Births to Unwed Mothers by Race; Florida, 1950, 1960, and 1965-1975[45]

Year	1950		1960		1965	1966	1967	1968	1969	1970	1971*	1972	1973	1974	1975
White	1.8		2.7		4.6	5.4	6.1	6.4	6.5	6.5	6.0	6.3	6.4	6.7	7.5
Non-White	23.2		27.9		30.8	32.0	34.4	36.7	38.7	41.1	44.0	47.7	50.1	51.6	53.0
Total	8.0		9.6		11.9	13.0	13.8	14.3	14.5	15.0	15.7	17.0	17.7	18.2	19.4

Source: Public Health Statistics Section, Florida Department of Health and Rehabilitative Services.

Sex Ratios

Sex ratios, that is, the number of males per hundred females either at birth or in a given population, cohort or region, can influence fertility behavior, the choice of work or marriage, the choice of deferring marriage as well as the rates and incidences of divorce, separation, and illegitimacy. The extent to which this may be an independent variable in demographic patterns which may influence any of the variables already discussed is unclear at this point, but it is the subject of a forthcoming monograph by Professor Marcia Guttentag of Harvard.

IV. WOMEN'S ENTRY INTO THE WORK FORCE

The changing role of women in our society is having and will continue to have a major effect upon the future of education.[1]

A higher proportion of women are heads of families. This is a result of the increasing incidence of divorce and of single women who keep their children. More women of each race, in every marital status, in every educational category, and with each number and age of children are now in the labor force.

The long-term trend since World War II is for larger numbers of young women to enter the work force at younger ages and to continue longer at work throughout their childbearing and later years. Women are employed in increasingly diversified jobs in the work force, although they still largely occupy less desirable positions. They are earning substantially less than men and that income gap is widening. Women earn 57 percent as much as men. Among the principal factors driving women into the work force are economics especially, as associated with being single, widowed, divorced or separated. However, among married women with working husbands there is a tendency for labor force participation to increase with the husband's income, but this tendency is more directly related to the educational level of the wife.

The long-term shift in the labor force toward a service and, more significantly, toward a knowledge-based economy is changing the nature of the work force. There should be more job opportunities open to women since such gender differencesas physical skill and strength become increasingly irrelevant to employment in a knowledge-based economy.

A. Implications for the School System

The primary implications for education of the women's entry into the workforce are on curriculum and services to the student, on extended care services for the children of working mothers, and on the reduced amount time for parental volunteer services. Dual income families may also have residential and school options of removing their children from urban public schools.

1. Curriculum

   - With regard to curriculum, since women are becoming an increasing factor in the work world, career planning, overcoming the stylized gender role associated with occupational choice, job counseling, and resocialization to new work-sex roles are highly socially and economically significant opportunities.

     Attitudes of children toward these future roles may be substantially influenced by working mothers who will set new role models. Those new role models will directly and indirectly reinforce the demand for work, career and vocationally oriented curriculum material and and counseling.

     The American Association of American Colleges' "Survey of Research Concerns on Women's Issues" noted:[2]

> Under recent Federal legislation, more funds now go into vocational and career training at the high school level, and many innovative and promising programs are under way. But most of them are directed at boys only. Girls continue to be shuttled into classes like 'Teen-Age Boutique.' Research is needed to document the extent to which sex segregation in vocational and technical education still exists despite laws that forbid it. The next step is to consider how to assure that the law is enforced and training programs are desegrated.
>
> Even when adolescent girls have high aspirations and expectations they may encounter opposition on both overt and subtle forms. For instance, research has shown that high school boys think that girls should not aim too high in their career plans. Any study of socialization, therefore, should take into account the attitudes of the peer group and the pressures it exerts on the individual. The possibilities of coeducational counseling might be explored.

- Since the age for entering marriage is generally increasing and is accompanied by earlier entry into the work force, curriculum material focusing on independent living, the single state, as well as guidance, counseling, and training in financial management and personal affairs is quite appropriate.
- For those in the lowest occupational strata, particularly those burdened by small children and/or single parenthood, education especially focused on improving one's economic state through continuation of course certification and specially tailored high school programs would have enormous personal, social and economic benefit.
- The reduced time available for parenting, in dual income families and especially in families with a single working head, may create the latent, if not overt, demand for new school services particularly dealing with those functions

historically learned at home. Eating, drinking, dressing and social behavior, deportment, manners, self-control, as well as other compensatory functions resulting from reduced adult care, may comprise this agenda.

2. Day Care

Women entering into the work force often have high demand for day care and nursery care for preschool and young school children. As this becomes a more generally pressing matter, a logical place to look for this service is in the schools. For children roughly between ages 7 and 13, the school day is not quite long enough to accommodate the needs of the dual parent working family nor the needs of single parent working households. There are efforts in some communities to extend the afternoon program through collateral services. These do not necessarily extend the educational school day, but are extending the use of education facilities. As a rough estimate, 15 percent of a random school population in this age group can be usefully served by extending facilities from 3 p.m. to 6 p.m. For mothers with younger children, the need for care and maintenance for longer periods, (effectively extended day care) suggests--in view of the underutilization of schools and surplus teacher supply--the possibility of extending school functions down into those areas. Administratively and from the point of view of surplus teachers,

teachers' unions and community needs, this option seems quite attractive. However, there are data, discussed below, coming out of the social psycho logical literature on the relationship between the intellectual performance of a child and his extended exposure to other children, which suggest adverse effects on mental development. These are, at least, cautionaries.

3. Dual Income Families

Women's entry into the labor force may be creating a new cadre of dual-income families with substantially higher income than comparable single working member families. Dual income especially in middle-class, managerial and professional households implies significantly more discretionary money which may lead to a tendency in such families, white and minority, to move their children to private schools or to relocate their residence outside central cities.

A compensatory balancing factor, however, may be that dual income families, particularly those higher up on the socio-economic ladder, may find it more difficult to find employment for both workers in smaller cities, other big cities, or rural areas. Hence dual-working families may tend to preferencially stay where they are or to locate in larger cities which have a more diverse occupational structure.

4. Volunteerism

As a result of being in the labor force, fewer women will have time for voluntary service in the schools. At the same time that the availability of voluntary services may be declining, there may be an increase in demand for the kinds of services that volunteers can perform well. This decline of volunteers implies a decline in services offered or else greater demands on paid staff.

5. Other Possible Effects

Since participation in the work force is associated with smaller numbers of children, as more women participate in the work force, this may tend to further depress or maintain low fertility.

Since participation in the work force by women is correlated with the level of education, as more women work, they will further stimulate the desire for more education and in turn stimulate that demand for their children.

B. The Data

This section deals with the facts and trends of women in the work force. The next section considers day care specifically.

1. Numbers

o Nearly 36 million women were in the labor force in 1974. This represents 46 percent of all women aged 16 or over and 39 percent of the total work force.

- The number of women in the work force has doubled since 1950 going from 18 million in 1950 to 36 million in 1974 (Figure 32).
- 4.6 million women of minority races (49%) were in the labor force in 1974.
- The Bureau of Labor Statistics projects that by 1985, 41 million women will be working, comprising over 38 percent of the total labor force. This is a continuing but slow rise (Table 30 and Figure 33).

b. Age

1) 53 percent of all women, aged 18-64, worked in 1974 (Table 31 and Figure 34).

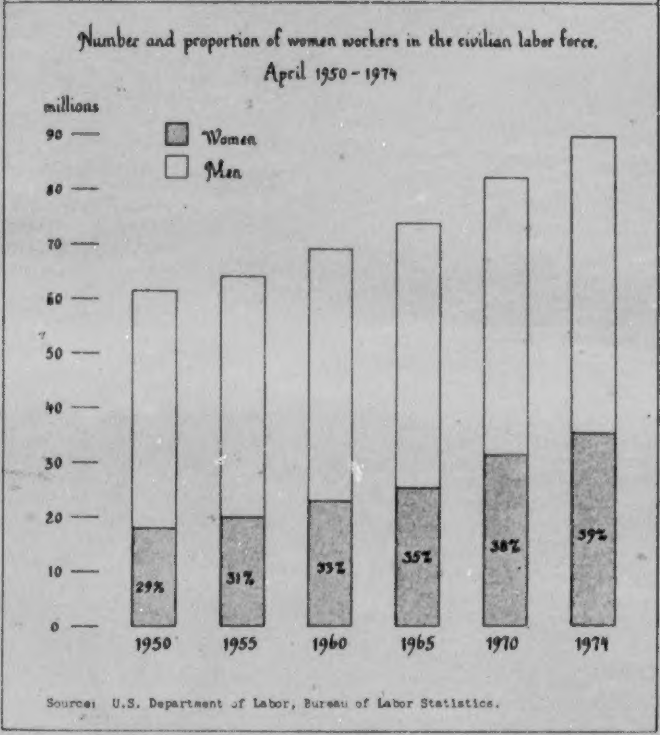
2) 63 percent of women in the 20-24 age group work (Table 31).

3) More important as a trend is the earlier entry since WW II of a large portion of women and their longer participation in the labor force over their lifetimes (Figure 35 and Table 31).

4. The participation pattern is approximately that of man, especially for women 20-40 years old, although the total percent participation is substantially less (Figure 36).

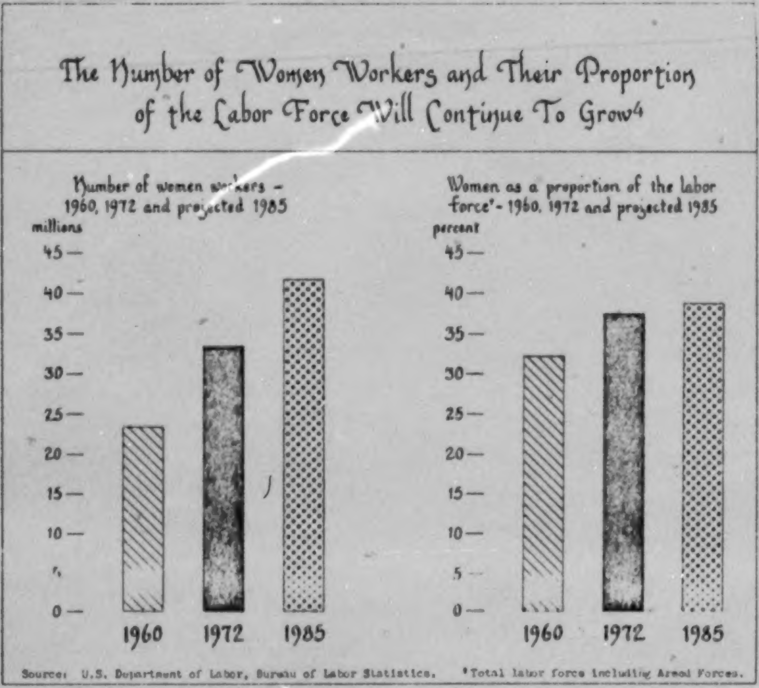
FIGURE 32

The Number of Women Workers Doubled between 1950 and 1974 -- And They Now Account for Nearly Two-fifths of All Workers[3]



Source: U.S. Department of Labor, Bureau of Labor Statistics.

FIGURE 33



The Number of Women Workers and Their Proportion of the Labor Force Will Continue To Grow[4]

Number of women workers – 1960, 1972 and projected 1985

Women as a proportion of the labor force[1] – 1960, 1972 and projected 1985

Source: U.S. Department of Labor, Bureau of Labor Statistics.

[1] Total labor force including Armed Forces.

Table 30. -TOTAL LABOR FORCE, BY AGE AND SEX, ANNUAL AVERAGE 1960, 1972, AND PROJECTED TO 1980 AND 1985

Sex and age	Number (in thousands)				Percent distribution			
	1960	1972	1980	1985	1960	1972	1980	1985
BOTH SEXES								
Total, 16 years and over	72,142	88,991	101,809	107,716	100.0	100.0	100.0	100.0
16 to 19 years	5,246	8,367	8,337	7,165	7.3	9.4	8.2	6.7
20 to 34 years	22,749	32,463	42,223	44,758	31.5	36.5	41.5	41.6
35 to 54 years	31,562	33,689	35,165	39,463	43.7	37.9	34.5	36.6
55 years and over	12,585	14,472	16,084	16,330	17.4	16.3	15.8	15.2
Median age in years	39.8	37.2	35.2	35.8	--	--	--	--
MEN								
Total, 16 years and over	48,870	55,671	62,590	66,017	67.7	62.6	61.5	61.3
16 to 19 years	3,184	4,791	4,668	3,962	4.4	5.4	4.6	3.7
20 to 34 years	16,019	20,601	26,375	27,896	22.2	23.1	25.9	25.9
35 to 54 years	20,974	21,116	21,759	24,361	29.1	23.7	21.4	22.6
55 years and over	8,692	9,163	9,788	9,798	12.0	10.3	9.6	9.1
WOMEN								
Total, 16 years and over	23,272	33,320	39,219	41,699	32.3	37.4	38.5	38.7
16 to 19 years	2,062	3,576	3,669	3,203	2.8	4.0	3.6	3.0
20 to 34 years	6,730	11,862	15,848	16,862	9.[illegible]	13.3	15.6	15.7
35 to 54 years	10,588	12,573	13,406	15,102	14.7	14.1	13.2	14.0
55 years and over	3,893	5,309	6,296	6,532	5.4	6.0	6.2	6.1

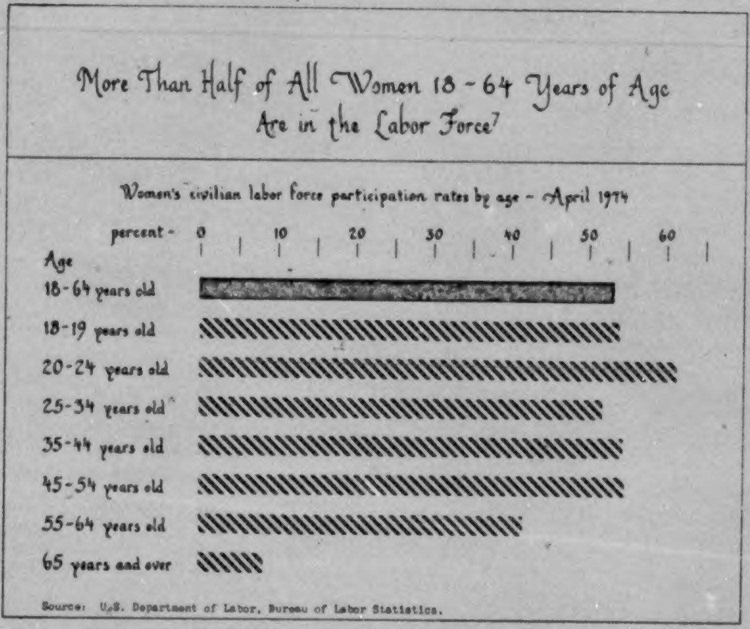
Source: For 1960 and 1972, U.S. Department of Labor, 1973 Manpower Report of the President, Table A-2; for 1980 and 1985, "The U.S. Labor Force: Projections to 1990," Monthly Labor Review, July 1973.

Table 31. LABOR FORCE PARTICIPATION RATES* OF WOMEN, BY AGE GROUPS, SELECTED YEARS, UNITED STATES, 1950 TO 1974[6]

Age Group	*1950*	*1960*	*1970*	*1974*
16 and 17 years	30.1	29.1	34.9	40.4
18 and 19 years	51.3	51.1	53.7	58.3
20 to 24 years	46.1	46.2	57.8	63.2
25 to 34 years	34.0	36.0	45.0	52.4
35 to 44 years	39.1	43.5	51.1	54.7
45 to 54 years	38.0	49.8	54.4	54.6
55 to 64 years	27.0	37.2	43.0	40.7
65 years and over	9.7	10.8	9.7	8.2
Total 16 years and over	33.9	37.8	43.4	45.7

*Percent of noninstitutional population in the labor force

FIGURE 34



More Than Half of All Women 18 - 64 Years of Age Are in the Labor Force[7]

Women's civilian labor force participation rates by age - April 1974

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE 33

–LABOR FORCE PARTICIPATION RATES[1] OF MARRIED WOMEN, BY EDUCATIONAL ATTAINMENT, PRESENCE AND AGE OF CHILDREN, AND INCOME OF HUSBAND, MARCH 1974 11

Income of husband and presence and age of children	All wives	Years of school completed				
		High school		College		
		Less than 4 years	4 years	1 year or more	1–3 years	4 years or more
All income classes	43.0	32.2	46.0	52.9	48.1	58.6
No children under 18 years	43.0	27.5	49.5	59.7	53.2	67.3
Children 6 to 17 years only	51.2	43.9	53.1	56.8	52.7	62.0
Children under 6 years	34.4	30.5	33.5	39.6	37.0	43.0
Under $3,000	35.5	25.3	44.6	61.1	56.2	68.0
No children under 18 years	32.0	22.5	40.8	58.3	53.9	64.8
Children 6 to 17 years only	54.6	44.3	63.4	([1])	([1])	([1])
Children under 6 years	36.8	25.7	40.6	([1])	([1])	([1])
$3,000 to $4,999	35.8	25.3	46.3	54.1	53.5	55.1
No children under 18 years	31.2	20.0	43.6	50.5	47.8	54.5
Children 6 to 17 years only	53.6	44.6	66.8	([1])	([1])	([1])
Children under 6 years	38.8	29.9	41.0	60.6	65.9	([1])
$5,000 to $6,999	43.3	31.3	50.6	59.3	55.8	66.0
No children under 18 years	40.4	25.7	50.5	60.5	56.5	66.7
Children 6 to 17 years only	54.4	42.3	64.0	69.5	70.4	([1])
Children under 6 years	40.6	34.5	41.7	51.5	48.0	62.1
$7,000 to $9,999	49.3	40.1	51.2	61.8	59.3	65.2
No children under 18 years	51.7	39.0	55.7	66.8	62.7	71.7
Children 6 to 17 years only	56.9	46.8	60.7	74.0	73.7	74.3
Children under 6 years	39.8	33.7	39.2	48.9	48.0	50.2
$10,000 and over	43.4	34.8	43.5	49.2	42.7	56.3
No children under 18 years	48.1	31.7	49.7	59.1	50.3	68.0
Children 6 to 17 years only	48.9	42.6	49.4	53.0	47.7	59.5
Children under 6 years	30.1	27.5	28.3	34.0	29.1	39.4

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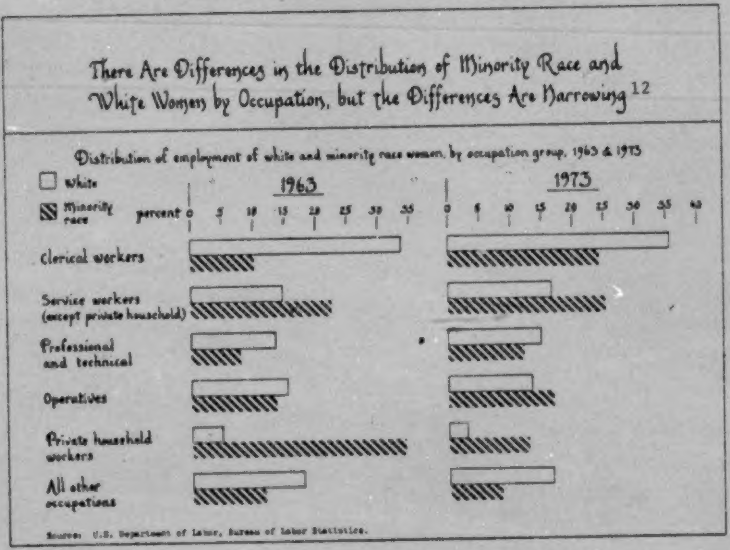
[1] Rate not shown where base is less than 75,000.

Source: U.S. Department of Labor, Bureau of Labor Statistics: Special Labor Force Report No. 173.

FIGURE 37

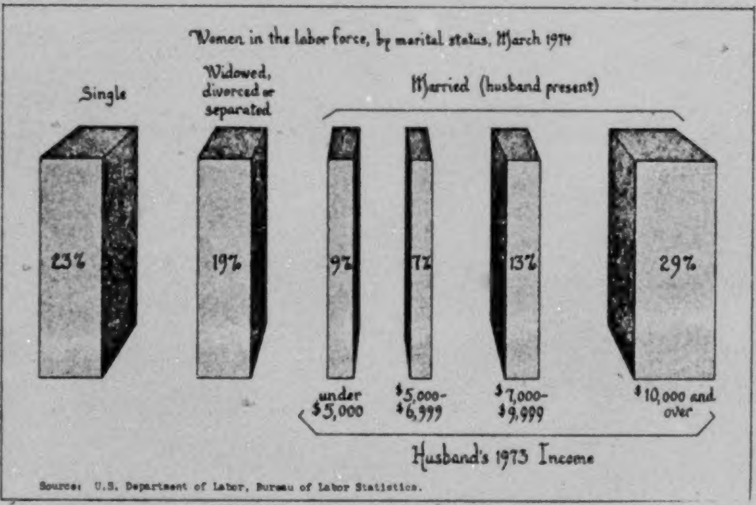


There Are Differences in the Distribution of Minority Race and White Women by Occupation, but the Differences Are Narrowing[12]

Distribution of employment of white and minority race women, by occupation group, 1963 & 1973

Source: U.S. Department of Labor, Bureau of Labor Statistics.

FIGURE 38[13]



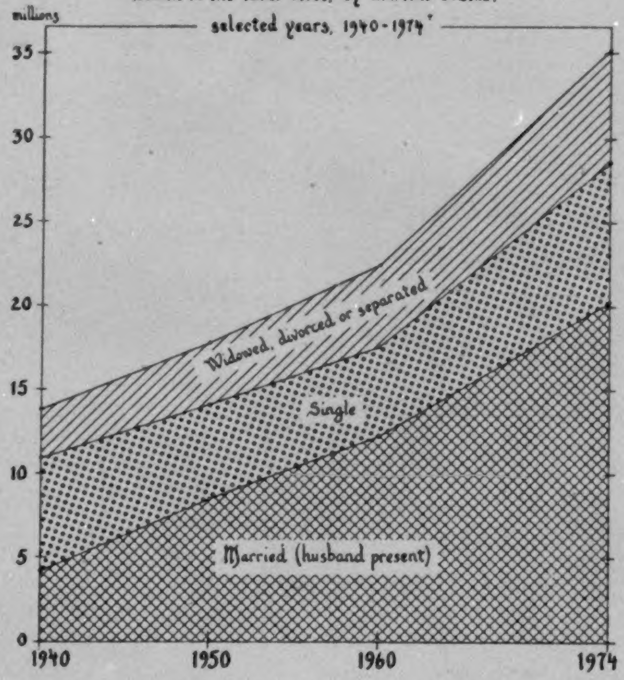
Women in the labor force, by marital status, March 1974

Source: U.S. Department of Labor, Bureau of Labor Statistics.

FIGURE 39

The Number of Married Women in the Labor Force Has Expanded Dramatically[14]

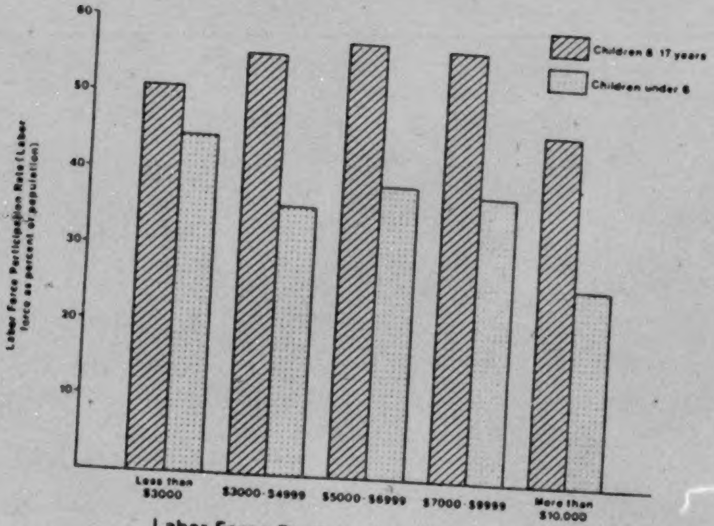
Women in the labor force, by marital status, selected years, 1940-1974*



*Data cover March of each year and are for females 14 years of age and over except 1974 which are for 16 and over.

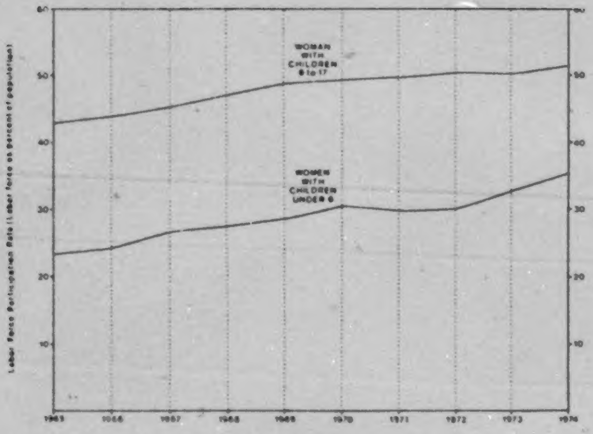
Source: U.S. Department of Labor, Bureau of Labor Statistics.

FIGURE 41



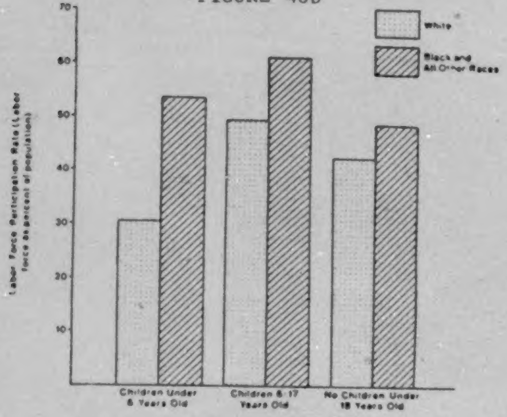
Labor Force Participation of Married Women With Children by Husband's Income: 1973[17]

FIGURE 40a



Labor Force Participation of Married Women with Children, Husband Present: 1965 to 1974[15]

FIGURE 40b



Labor Force Participation of Married Women With Children by Race: 1973[16]

4) In March 1973, the number of unemployed married women reached 8.5 percent, the highest recorded since 1940.

5) About half of the unemployed married women reported job loss as the reason for unemployment, a clear departure from the usual pattern where entry or reentry is the major reason. The proportion of unemployed married men citing job loss rose from 77 to 85 percent over the year.

6) As in the past, the unemployment rate was higher for mothers of preschool age children (14 percent) than for either married women without children under age 18 or for married women whose youngest child was school age (both 7 percent).

7) Unlike the preceding 12-month period ending in March 1974 this growth was dominated by single and divorced persons, married women led the increase between March 1974 and March 1975. They accounted for about 45 percent of the net increase in the labor force, compared with 30 percent for single men and 20 percent for divorced persons.

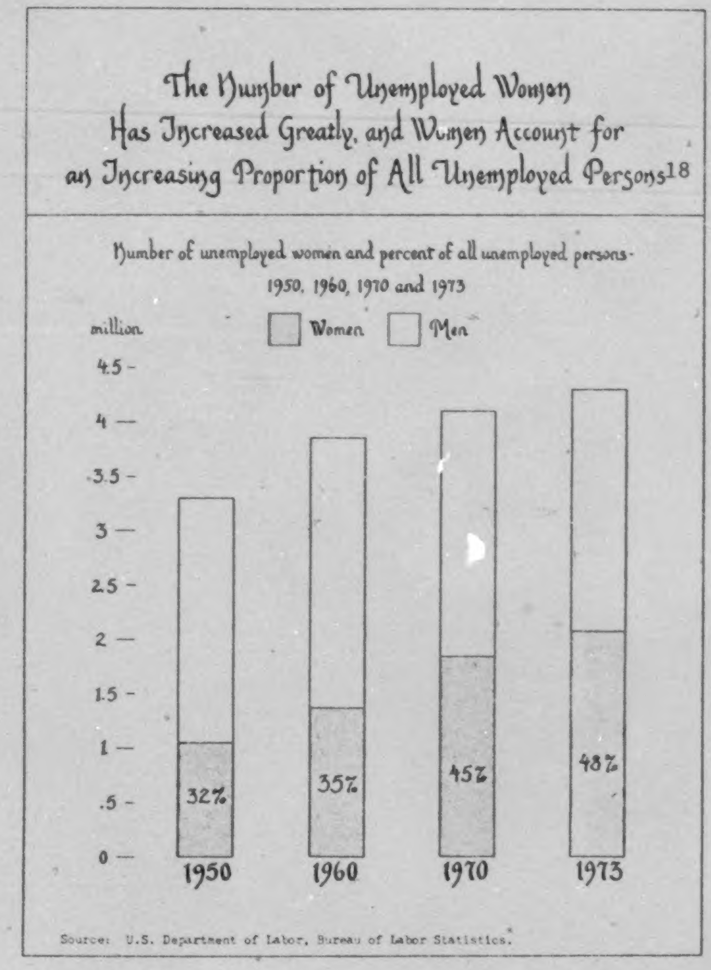
e. Marital Status

1) Married women (husband present) account for 56 percent all women workers (Figure 39).

2) 43 percent of all married women work.

3) Women living with spouse and having children tend to work in direct proportion to the age of children. Further, at all ages of children there is significant participation by mothers in the labor force (Figure 43 and Tables 34 and 35).

FIGURE 42



Source: U.S. Department of Labor, Bureau of Labor Statistics.

4) Since 1950, labor force participation by women has risen from 23.8 to 43 percent. For those only with children under 6, the rate has jumped from 11.2 percent in 1956, to 35 percent in 1974 (Figure 43).

TABLE 34

LABOR FORCE PARTICIPATION RATES OF MARRIED WOMEN, HUSBAND PRESENT, BY PRESENCE AND AGE OF CHILDREN, UNITED STATES, 1950 TO 1974 19

Year	*Total*	*No Children under 18*	*Children 16-17 only*	*Children under 6 years*	
				and 6-17	*without 6-17*
1950	23.8	30.3	28.3	12.6	11.2
1960	30.5	34.7	39.0	18.9	18.2
1970	40.8	42.2	49.2	30.5	30.2
1974	43.0	43.0	51.2	32.9	35.7

f. Heads of Household

1) There were 6.9 million female-headed families in 1974.

2) 54 percent of these female heads work (Table 36).

3) 10 percent of all women workers are heads of families (3.7 million). Among these, 20 percent had incomes below 1973 poverty levels.

g. Working Mothers and Their Children

1) 13.6 million mothers with children under 18 are in the labor force

2) 5.1 million have children under age 6

3) 26.8 million children have working mothers

20.7 million children aged 6-17 have working mothers

FIGURE 43

Labor Force Participation Rates of Women Living with Spouse and Children 20

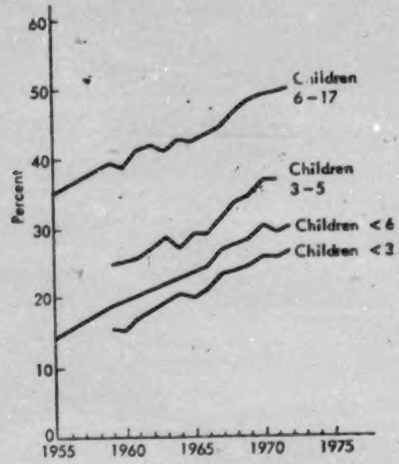


TABLE 35

LABOR FORCE PARTICIPATION RATES 21

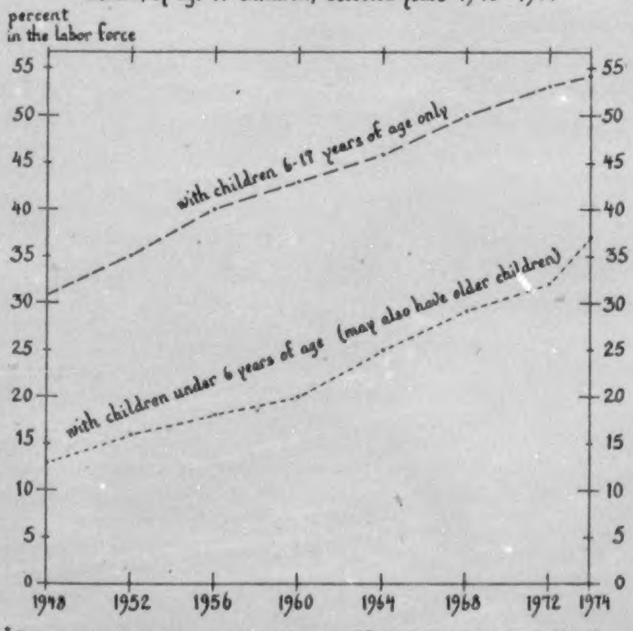
Age	*Never Married*	*Married–Spouse Present*			
		No Children	*Child under 3*	*Child 3-5*	*Child 6-17*
20-24	72	72	33	48	—*
25-34	86	77	—		54
35-44	78	60	—		53

**Note:* indicates not applicable or not available.

FIGURE 44

Mothers Are More Likely To Work Than Ever Before. More Than Half of All Mothers of School Age Children Were in the Labor Force in 1974.[22]

Civilian labor force participation rates of ever-married women, by age of children, selected years 1948-1974*



* Data cover March of each year except for April 1948 and 1952, and are for females 14 years of age and over except in 1968, 1972 and 1974, which are for 16 years and over.

Source: U.S. Department of Labor, Bureau of Labor Statistics.

TABLE 36

—LABOR FORCE STATUS OF FEMALE FAMILY HEADS, BY AGE, MARCH 1974[23]

(Women 16 years of age and over)

Age	Number (in thousands)		Percent distribution		Percent in labor force
	Population	Labor force	Population	Labor force	
Total	6,798	3,679	100.0	100.0	54.1
16 to 24 years	601	299	8.8	8.1	49.8
25 to 34 years	1,484	936	21.8	25.4	63.1
35 to 44 years	1,418	939	20.9	25.5	66.2
45 to 54 years	1,255	867	18.5	23.6	69.1
55 to 64 years	904	531	13.3	14.4	58.7
65 years and over	1,136	107	16.7	2.9	9.4

Source: U.S. Department of Labor, Bureau of Labor Statistics: Special Labor Force Report No. 173.

6.1 million children under 6 have working mothers

4.6 million children had working mothers who were heads of families.

4) The financial need in the absence of a husband in female-headed families is reflected in the relatively high rate of labor force participation:

54% for female headed families; the comparable participation rate is

45% for all women and

43% for women with husbands present

g. Income

1) Women earn less than men in all categories and at every status level (Tables 37 and 38).

2) Black women earn less than white women in all categories.

3) Income differences between men and women have widened since 1956. In 1973, the median annual income of full time, year-round women workers was only 57 percent of that of men.

4) Some factors associated with the lower earnings of women workers:

   o job segregation (the confinement of females to a relatively few occupations, most of a low-pay status)

   o the social responsibility of females with families to perform the child care and housework functions

Even when both husbandand wife are earning wages, the wife is responsible for the housework. According to Cornell University Studies, men devote an average of 1/2 hour each day to housework, and the average does not rise when their wives work.[24]

5) Husband/wife families earn substantially more than single parent families (See Table 39).

Black families earn substantially less than white families in all categories. Comparing all families in 1974, Black families earn about 58 percent as much as white families. Husband-and wife-working Black families earn 75 percent as much as comparable white families. If the wife is in the paid labor force, the Black/white gap shrinks somewhat so that the Black family was earning about 77 percent as much as the white families. In general all of these ratios are slightly down from the high of 1972 (See Figure 45).

h. Dual Income Families

Peter Morrison of the RAND Corporation has pointed out that:

> The conventional family model of husband-breadwinner and wife-homemaker to which 56 percent of husband-wife families conformed a quarter century ago, is valid for only 34 out of 100 today. It is being replaced by the multiworker family (in which, most typically, the husband and wife are workers, but in some cases the husband or wife and another family member).
>
> Family members other than the wife have not contributed much to the increasing proportion of multiworker families, however. As of 1975, in only 16 percent of multiworker families was there an additional worker who was not the wife.
>
> As the turn of this century, approximately one in 20 wives were classified as "gainfully employed;" by 1910 that fraction had increased to about one in 10. Since midcentury (after the influx of women into the labor force induced by World War II), the labor force participation rate of wives has advanced from 23.8 percent in 1950 to 44.4 in 1975, and the closely related percentage of husband-wife families with 2 workers or more has risen from 36.1 to 48.7 percent."25

As pointed out above, the long-term rise of the working wife has moved to:

141'

TABLE 37

MEDIAN WAGE OR SALARY INCOME OF YEAR-ROUND FULL-TIME WORKERS,[1] BY SEX AND RACE, 1939 AND 1960–73 26

Year	Median income				As percent of white men			As percent of minority race men		As percent of white women
	Women		Men							
	White	Minority race	White	Minority race	White women	Minority race women	Minority race men	White women	Minority race women	Minority race women
1973	$6,544	$5,772	$11,633	$8,363	56.3	49.6	71.9	78.2	69.0	88.2
1972	6,131	5,320	10,786	7,548	56.8	49.3	70.0	81.2	70.5	86.8
1971	5,749	5,181	9,801	6,928	58.7	52.9	70.7	83.0	74.8	90.1
1970	5,490	4,674	9,373	6,598	58.6	49.9	70.4	83.2	70.8	85.1
1969	5,168	4,231	8,876	6,158	58.2	47.7	69.4	83.9	68.7	81.9
1968	4,700	3,677	8,014	5,603	58.6	45.9	69.9	83.9	65.6	78.2
1967	4,394	3,363	7,512	5,069	58.5	44.8	67.5	86.7	66.3	76.5
1966	4,152	2,949	7,164	4,528	58.0	41.2	63.2	91.7	65.1	71.0
1965	3,991	2,816	6,704	4,277	59.5	42.0	63.8	93.3	65.8	70.6
1964	3,859	2,674	6,497	4,285	59.4	41.2	66.0	90.1	62.4	69.3
1963	3,723	2,368	6,277	4,104	59.3	37.7	65.4	90.7	57.7	63.6
1962	3,601	2,278	6,025	3,799	59.8	37.8	63.1	94.8	60.0	63.3
1961	3,480	2,325	5,880	3,883	59.2	39.5	66.0	89.6	59.9	66.8
1960	3,410	2,372	5,662	3,789	60.2	41.9	66.9	90.0	62.6	69.6
1939	863	327	1,419	639	60.8	23.0	45.0	135.1	51.2	37.9

[1] Worked 35 hours or more a week for 50 to 52 weeks.

Source: U.S. Department of Commerce, Bureau of the Census: Current Population Reports, P-60, Nos. 96, 84, 80, 75, 66, 69, 53, 51, 47, 43, 41, 39, 37, 27, and P-60, No. 98 (Advance report).

TABLE 38

THE RELATIVE INCOME OF WHITE AND NEGRO WOMEN, 1972 [27]

(Year-round, Full-Time Workers)

	White Females	White Males	Ratio	Negro Females	Negro Males	Ratio
Northeast	$6,440	$11,283	.57	$6,063	$7,730	.78
North Central	6,190	11,151	.56	5,949	9,084	.65
South	5,631	9,690	.58	4,405	6,043	.73
West	6,873	11,834	.58	6,889	9,056	.76

Source: "Money Income in 1972 of Families and Persons in the U.S.," CPR, Consumer Income, Series P-60, no. 87, Washington, D.C.: Bureau of the Census, June 1973, table 7.

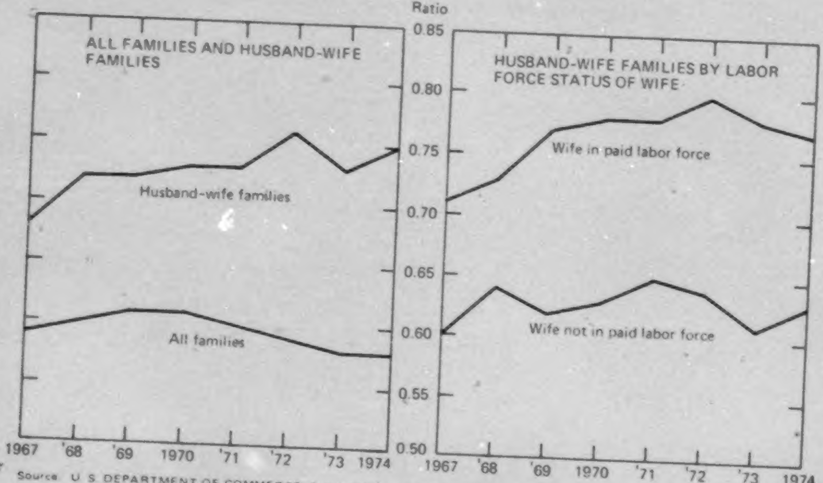
TABLE 39

MEAN FAMILY INCOME, 1973 [28]

		Single-Parent Families	
Age of Head	**Husband-Wife Families**	**Male-Headed**	**Female-Headed**
Under 25	$ 8,922	$ —	$3,198
25-44	15,114	11,931	5,951
45-64	17,761	12,078	7,205

Source: "Money Income in 1973 of Families and Persons in the U.S.," *Current Population Reports*, Series P-60, no. 97, table 29, Washington, D.C.: U.S. Bureau of the Census.

FIGURE 45. Ratio of Median Family Income of Blacks and Whites, by Type of Family and Labor Force Status of Wife: 1967 to 1974[29]



Source: U. S. DEPARTMENT OF COMMERCE, Social and Economic Statistics Administration, Bureau of the Census

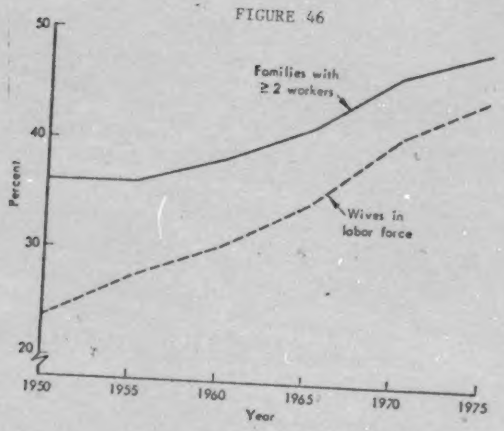
...progressively younger ages (Table 35). During the 1950's, labor force participation rates of wives were rising the fastest for older women. After 1965, however, the sharpest increases occurred among women under 35. In overly simplified terms, the secular rise of working wives used to depend heavily on changes in wives' activities after childbearing and early childrearing. More recently, it has come about because of changes in women's activities during these stages of the family life cycle; as such, it is indicative of a basic shift in the way that young wives order their careers as mothers or income-earners. Traditionally, childbearing among earlier cohorts was accompanied by a complete withdrawal from the work force for a period of years (the time being extended by each successive child). Because such withdrawal covered those years in which job advancement would be most rapid, women lost the opportunity to establish their careers or to gain seniority or experience before they withdrew. More recently, married women in their thirties and older, often with schoolage children, are in the labor force, either because they have returned after a brief absence or because they never left.

Why Dual Income Families?

The rise of working wives probably results from several interrelated social and economic changes in recent years. More money is assumed to be good. Table 42 shows that when the husband was the only earner, median family income in 1974 averaged $12,360, compared with $14,885 (20 percent higher) when both husband and wife had earned.

- More flexibility in family living has encouraged wives to expand their role in the job market. One indication of this is found in the sharply rising rates of labor force participation among wives in their early twenties with preschool children at home--up from 24 percent in 1964 to 37 percent in 1974.

FIGURE 46



—Increase in percent of wives in labor force and percent of husband-wife families with 2 or more workers: 1950 - 1975[30]

TABLE 40

PERCENTAGE POINT CHANGES IN LABOR FORCE PARTICIPATION RATES OF WIVES 16 TO 64 YEARS OLD FOR 5-YEAR INTERVALS, 1950-75[31]

Period (March to March)	16 to 19 years	20 to 24 years	25 to 34 years	35 to 44 years	45 to 64 years
1950-55[1]	-4.2	0.9	2.2	5.2	7.2
1955-60	2.8	0.6	1.7	2.5	5.2
1960-65	1.7	3.6	4.4	4.4	4.8
1965-70	9.0	11.8	7.2	6.6	5.1
1970-75	9.6	9.7	9.0	4.9	0.0

[1] The reference month for 1955 is April.

NOTE: Data for years prior to 1967 include persons 14 years old and over; in accordance with the change introduced in 1967, data for subsequent years include only persons 16 years old and over.

- There is growing disinclination among college women to confine their activities to the home and family. Annual national surveys show that far fewer first-year college women endorse that traditional role now than they did even in the recent past (only 18 percent in 1975 compared with 44 percent in 1967).
- Rising demand for female workers and declining fertility add strongly to this trend.
- The rapid expansion of jobs in those industry sectors (especially the service sector) in which women most often hold jobs has been a further stimulus to female labor force participation.
- The trend toward smaller families must be viewed as both a permissive influence, enabling young wives to work outside the home, and a product of their involvement with the labor market.
- The future worklives of men and women will likely come to resemble each other more and more, both in terms of occupational distribution and time spent in the labor force. Greater attachment to career makes for more advancement in careers. Increasingly higher incomes may result.

The median income of families with working wives has increased faster than for families in which wives were not in the paid labor force. Between 1950 and 1974, median annual income (adjusted for inflation) of families more than doubled for the former group, but increased by only 80 percent for the latter Table 42). Women's rapidly increasing representation in higher-paying professional occupations is likely to widen this income difference between families with two workers and those with only one.

P. Morrison of Rand speculated "...the proliferation of multiworker families will necessitate more daily travel, since for many such families there will be two daily journeys to work instead of one. Also, since multiworker families will place greater value on proximity to employment, this change in the division of labor within families could even feed back on residential settlement patterns, influencing where families choose to live in relation to major employment centers within a metropolitan area."

Such resettlement patterns could influence the choice of schools by prosperous middle-class families.

TABLE 41

MEDIAN FAMILY INCOME BY WIFE'S LABOR FORCE STATUS [32]

	Median family income (in 1974 dollars)	
	Wife in paid labor force	*Wife not in paid labor force*
1950	$ 8,200	$ 6,791
1960	11,490	9,192
1965	13,437	10,303
1970	15,759	11,816
1974	16,928	12,082

Source: Hayghe, op. cit.

TABLE 42

MEDIAN INCOME OF HUSBAND-WIFE FAMILIES IN 1974 BY NUMBER OF EARNERS AND RELATIONSHIP TO HUSBAND [33]

Relationship to husband	Median family income			Number of husband-wife families (thousands)		
	1 earner	2 earners	3 earners or more	1 earner	2 earners	3 earners or more
Total	$11,955	$15,120	$20,975	15,637	19,878	7,199
Husband only	12,360	......	....	13,958	....	....
Wife only	8,275	....	....	1,193	....	....
Other relative only	11,855	....	....	451	....	....
Husband and wife earners	....	14,885	21,045	....	16,699	5,527
Husband and others, not wife	....	17,335	20,935	....	2,876	1,551
Husband not an earner	....	11,685	15,055	....	304	121

NOTE: Family income was $5,520 in 1974 for the 4.3 million husband-wife families that had no earners.

Source: Hayghe, op. cit., Table 7.

V. IMMIGRATION, LANGUAGE AND CULTURE

Immigration will undoubtedly continue to influence elementary and secondary schools, especially in large cities.[1]

Approximately 25 percent of the annual population increase in the United States is due to immigration. In 1970, approximately 10 million persons living in the United States were foreign born, only 5 percent of these were of school age (5 to 19 years old). Roughly 400,000 persons are admitted to the United States each year. About 36 percent of them are under 20 years old, and are thus likely to directly or soon enroll in schools (Figure 47). Furthermore, the age distribution of the recent immigrant population is slightly younger than the average age distribution of the native population (compare Figure 1 with Figure 47). Hence, that population, all other things being equal, is likely to be about as fecund as native Americans. The average number of children born to foreign born women 25 to 44 years old was 2.1 as of 1970 compared with 2.6 for native women the same age.

There are no reliable estimates of the number of persons who enter the United States each year through illegal channels. Furthermore many enter and leave repeatedly. But illegal immigrants will further aggravate any school problems associated with immigrants.

More than half of the immigrants of school age in 1975 came from Spanish speaking countries--Mexico, South America, the Philippines or

FIGURE 47

IMMIGRANTS ADMITTED IN 1975
BY AGE AND SEX[2]

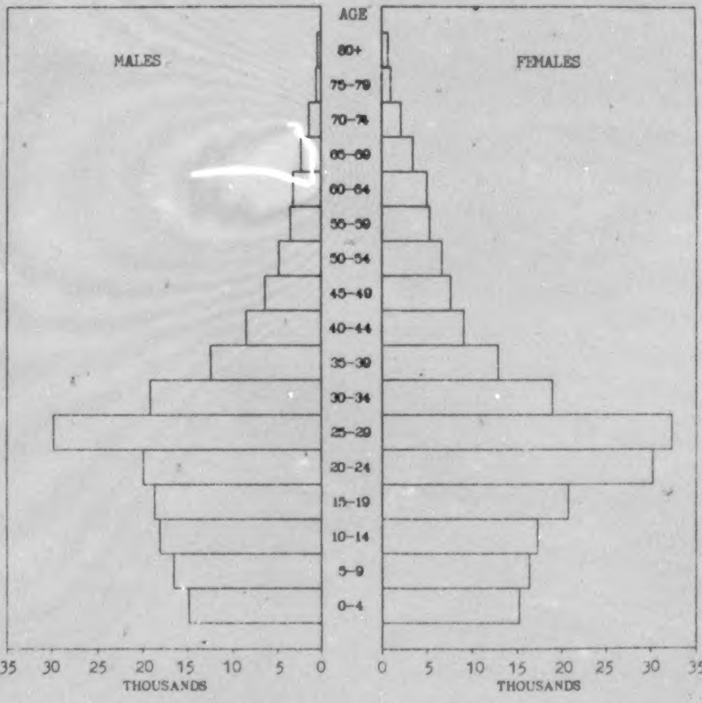


TABLE 43

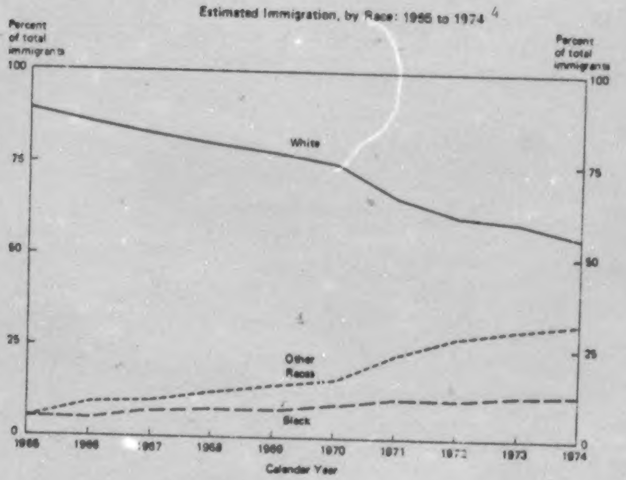
POPULATION OF SPANISH ORIGIN BY SEX AND TYPE OF SPANISH ORIGIN: MARCH 1974

(Numbers in thousands. Civilian noninstitutional population)[3]

Type of origin	Total		Male		Female	
	Number	Percent	Number	Percent	Number	Percent
Persons of Spanish origin....	10,795	100.0	5,285	100.0	5,510	100.0
Mexican..........................	6,455	59.8	3,259	61.7	3,196	58.0
Puerto Rican.....................	1,548	14.3	717	13.6	830	15.1
Cuban............................	689	6.4	326	6.2	362	6.6
Central or South American........	705	6.5	341	6.5	364	6.6
Other Spanish....................	1,398	13.0	641	12.1	757	13.7

FIGURE 48

Estimated Immigration, by Race: 1965 to 1974 [4]



Spain (Table 43). Since 1965 white immigration has declined while Black immigration and other races have increased (Figure 48).

Immigrants concentrate in large cities as shown in Table 44. In 1975 of the 386,194 legal immigrants:

- 34 percent located in the ten largest U.S. metropolitan areas
- 37 percent were locted in the 15 largest areas
- 45 percent were located in cities with a population greater than a million.

A. Implications of Immigration and Non-English Speaking Student Populations on the School System

- Since immigrants to a very large extent settle in metropolitan areas and more specifically in inner cities, continuing immigration will provide a chronic source of stress for big city school systems.
- The relationships between immigration, foreign language and educational success raise to some high priority the question of the role, function, and style of bilingual education, what it accomplishes, and what the opportunity costs are, i.e., what the student does not get at the price of bilingual teaching. A further factor influencing the interpretation of these relationships is the long-term movement of the United States into an information based society. Right now some 55 percent of the work force is in the information business. In an information society, presumably the widest road to upward

TABLE 44

IMMIGRATION PATTERNS TO LARGEST U. S. CITIES[5]

City	Total Population	(1975) Number of Immigrants (choice of residence)
New York	9,973,577	73,630
Los Angeles-Long Beach	7,032,075	19,328
Chicago	6,988,947	17,083
Philadelphia	4,817,914	2,954
Detroit	4,431,390	2,754
San Fran.-Oakland	3,109,519	9,887
Washington, D.C.	2,908,801	2,549
Boston	2,899,101	1,580
St. Louis	2,410,163	830
Pittsburg	2,401,245	701
		131,296
Dallas-Ft. Worth	2,377,979	2,209
Baltimore	2,070,670	1,796
Cleveland	2,064,194	1,226
Newark	2,054,928	3,278
Houston	1,999,316	4,059
		12,568

131,296
12,568

143,864 Total Number Immigrants for 15 largest metro areas.

mobility is the ability to collect, handle, utilize, interpret and be facile with information, the bulk of which is in some printed form and in English.

o The implications of the stress of meeting the education of foreign born and non-English speaking students in bilingual programs in systems of limited and strained resources are by no means trivial.

o It is not clear whether the social goals of bilingual education or alternative education strategies with foreign language students are clearly and sharply enough understood. The personal objectives of the students and their families and the potential options open in alternative school programs may not be well enough understood or integrated into school planning.

o Should the education of foreign language students, particularly in big cities, overstress the system so that the job is done badly, it may also reduce the level of education of English-speaking students and further accelerate the decline of the large urban school systems.

o On the other hand, the presence of large foreign born populations creates an opportunity for local school districts to provide English citizenship and other types of secondary school courses for foreign born or non-English speaking adults. This may provide an interesting means of using school buildings and facilities more extensively in a period of overall enrollment decline.

- The fact that bilingual education is available in school systems may provide special appeal to English speaking middle-class families who put some particular value on a second language. This objective ought not obscure the major social objectives of mono or multi or bilingual teaching.
- One may anticipate that the continual immigration of foreign born students will create continual renewal of the kinds of cross cultural stresses associated with hard to acculturate students, i.e., delinquency, and poor school performance, particularly for urban school systems. Closer attention could be paid to this situation.
- If this point is not clear whether proposals to regularize or change the status of illegal immigrants might not have an effect on school systems by promoting marriage and family formation and a higher rate of entry of children of now illegal immigrants into the school system. Again this will especially affect big city systems and the smaller communities in the Southwest and in California.

B. Ethnic Make-Up of the School Age Population

A 1975 summary of the ethnic composition of school age population--4 years old or older--shows that it was 11 percent Black, 5 percent Spanish origin and 1 percent selected Asian (Chinese, Japanese, Philippino or Korean). These are of course not all immigrants.

As shown in Figures 49 and 50, these are relatively young populations. Over 40 percent of the Spanish population is between 4 and 18 years old and 54 percent is less than 25 years old. Fifty-one percent of Blacks are less than 25 years old, and 40 percent of the selected Asians are below 25.

The overt impact of immigration and foreign language-speaking students on schools may be seen in these principal ways:

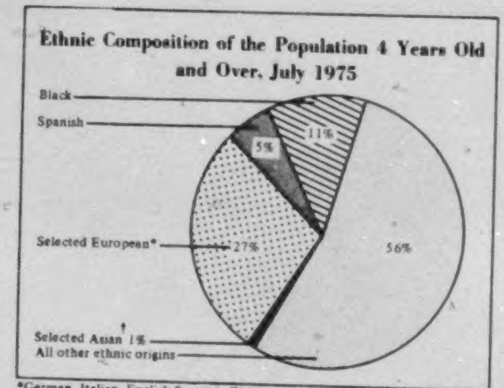
- Language difficulties,
- Behavioral problems associated with the acculturation and socialization of children,
- Unanticipated growth of school age population especially where affected by the uncertainty of illegal immigrants.

C. Language

A sense of the major languages in use in the United States in households can be seen from Table 45. Some 25 million of those 4 years and older use some language other than English as their usual household language. Two hundred and sixty-eight million use English only. The dominant non-English languages are Spanish, French, German, and Italian.

The immigration of foreign language speaking students is dominated by those speaking Spanish languages and dialects; Mexicans and Puerto Ricans will assure continuing major regional problems on issues of bilingual as well as multicultural education (Figure 51).

FIGURE 49



*German, Italian, English, Scottish, Welsh, Irish, French, Polish, Russian, Greek, Portuguese

†Chinese, Japanese, Filipino, Korean

FIGURE 50

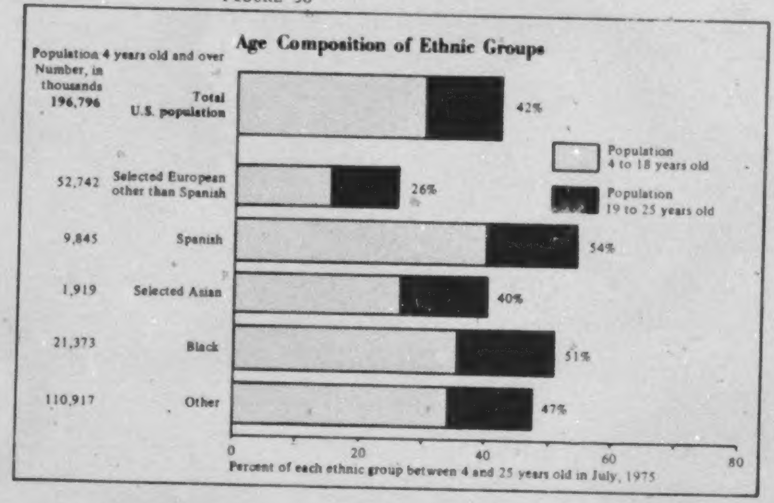
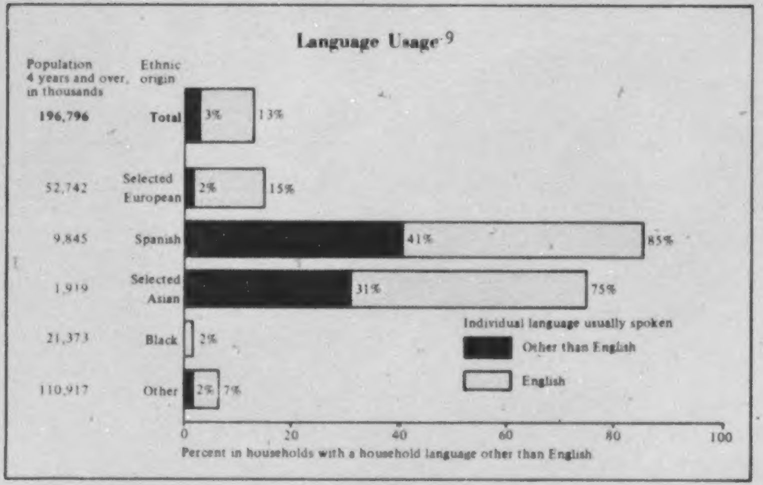


TABLE 45

Household Languages of the Population: July 1975[8]

Language spoken in households	Total population, 4 years old and over	School-age population, 4 to 25 years old
Total	**196,796,000**	**83,150,000**
English only	167,665,000	71,404,000
Non-English as usual or other language. . . .	25,347,000	10,639,000
Spanish	9,904,000	5,162,000
French.	2,259,000	967,000
German	2,269,000	794,000
Greek	488,000	189,000
Italian	2,836,000	952,000
Portuguese	349,000	117,000
Chinese	534,000	219,000
Filipino	377,000	174,000
Japanese.	524,000	213,000
Korean.	246,000	107,000
Other.	5,559,000	1,741,000
Not reported	3,786,000	1,106,000

FIGURE 51


Language Usage 9
Population 4 years and over, in thousands
Ethnic origin
196,796
Total
3%
13%
52,742
Selected European
2%
15%
9,845
Spanish
41%
85%
1,919
Selected Asian
31%
75%
21,373
Black
2%
110,917
Other
2%
7%
Individual language usually spoken
Other than English
English
0
20
40
60
80
100
Percent in households with a household language other than English

The recent data reported from the National Center for Educational Statistics Surveys shows interesting relationships between household language and education.

People who speak a language other than English do not participate in the educational system to the same extent as those who usually speak English (Figure 52 and Table 46).

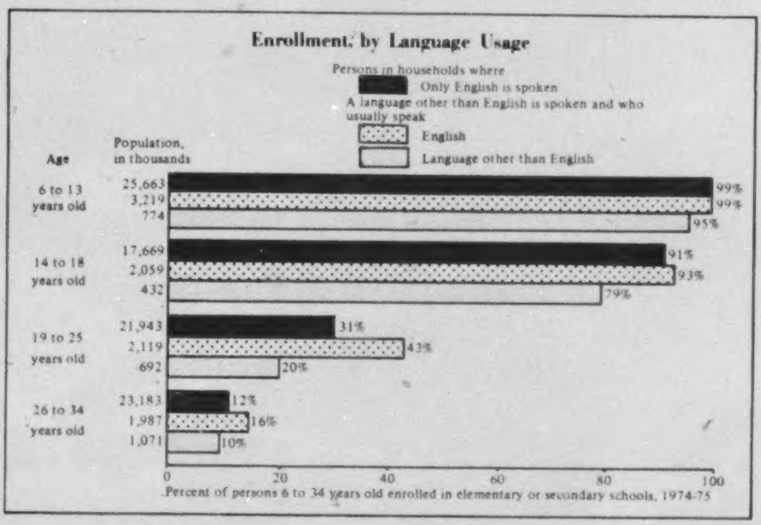
By age 14 to 18, only 79 percent of those from families speaking a language other than English and who themselves usually speak a language other than English attend school. In contrast 91-93 percent of those from English-speaking families or who speak English at home attend.

However, similar relationships may be seen among those of the more selected group of Spanish origin or Spanish language use (Figure 53).

The implication of foreign language for school performance in terms of the percentage of students two or more grades below their age mode is shown in Figure 54 and Table 47.

Among those of European origins, approximately 8 to 10 percent are below mode from grade one to twelve. Among Blacks, most are in mode through the eighth grade. By grade 12, however, approximately 24 percent are below mode through the 8th grade. By grade 12, however, approximately 24 percent are below mode. This

FIGURE 52



Enrollment, by Language Usage

TABLE 46 —**Number and percent of 4- to 34-year-olds enrolled in school during 1974-75 by their household and individual language characteristics and age: July 1975** 11

Age and enrollment	Total	English only household language	A Non-English language is spoken in the household				Household language not reported
			Total	Usual language spoken by individual			
				English	Non-English	Not reported	
			(Numbers in thousands)				
Total 4 to 34 years old	**110,002**	**94,582**	**13,857**	**9,999**	**3,245**	**613**	**1,563**
Number enrolled	**62,223**	**53,557**	**8,308**	**6,614**	**1,392**	**302**	**358**
Percent enrolled	**57**	**57**	**60**	**66**	**43**	—	—
4 and 5 years old	**7,065**	6,125	929	614	275	(*)	(*)
Number enrolled	**2,744**	2,374	365	275	72	(*)	(*)
Percent enrolled	**39**	39	39	45	26	—	—
6 to 13 years old	**29,879**	25,663	4,156	3,219	774	163	60
Number enrolled	**29,542**	25,391	4,092	3,199	738	155	60
Percent enrolled	**99**	99	98	99	95	—	—
14 to 18 years old	**20,874**	17,669	2,583	2,059	432	92	622
Number enrolled	**18,724**	16,133	2,325	1,918	342	65	266
Percent enrolled	**90**	91	90	93	79	—	—
19 to 25 years old	**25,331**	21,943	2,972	2,119	692	161	416
Number enrolled	**7,939**	6,828	1,085	910	137	(*)	(*)
Percent enrolled	**31**	31	37	43	20	—	—
26 to 34 years old	**26,852**	23,183	3,216	1,987	1,071	158	453
Number enrolled	**3,274**	2,831	441	313	103	(*)	(*)
Percent enrolled	**12**	12	14	16	10	—	—

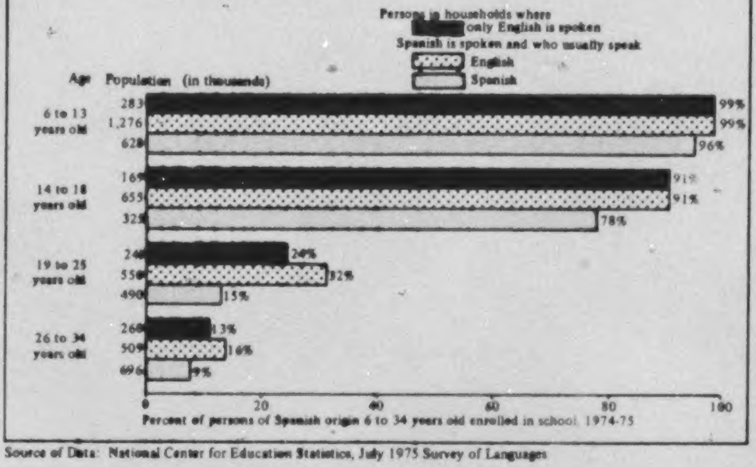
* Estimates less than 50,000

NOTE This *July 1975 Survey of Languages*, a supplement to the Census Population Survey was conducted by the Bureau of the Census for the National Center for Education Statistics

SOURCE U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *July 1975 Survey of Languages*, preliminary data

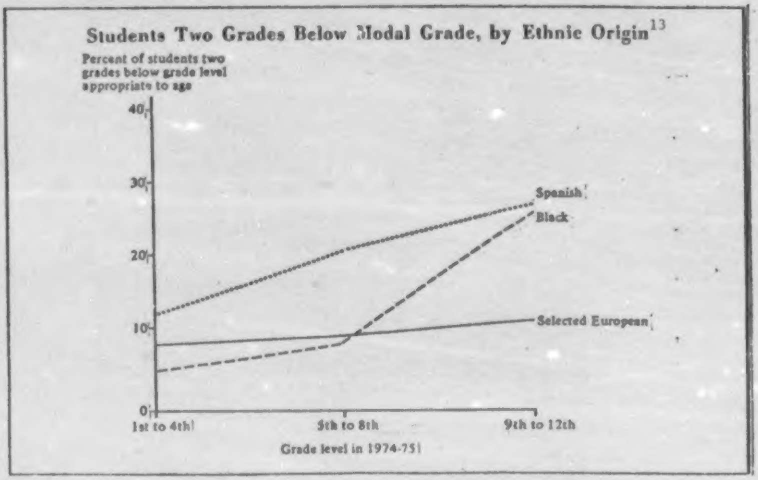
FIGURE 53

Enrollment of Persons of Spanish Origin, by Language Usage 12



Source of Data: National Center for Education Statistics, July 1975 Survey of Languages

FIGURE 54



Students Two Grades Below Modal Grade, by Ethnic Origin[13]

TABLE 47 Students in grades 1 to 12 who are 2 grades below modal grade,[1] by ethnic origin: 1974-75 14

Ethnic origin	Total grades 1 to 12			Grades 1 to 4			Grades 5 to 8			Grades 9 to 12		
	Total enrolled	Enrolled below	Percent enrolled below	Total enrolled	Enrolled below	Percent enrolled below	Total enrolled	Enrolled below	Percent enrolled below	Total enrolled	Enrolled below	Percent enrolled below
	(Numbers, in thousands)											
Total	**36,077**	**5,540**	**15**	**14,366**	**1,307**	**9**	**16,314**	**2,021**	**12**	**15,397**	**2,212**	**14**
Selected European[2]	6,324	602	10	1,871	149	8	2,233	196	9	2,220	250	11
Spanish[3]	3,067	581	19	1,090	128	12	1,184	241	20	793	212	27
Selected Asian[4]	414	58	14	134	(*)		125	(*)		155	(*)	
Black	12,354	1,196	10	5,072	264	5	5,235	409	8	2,047	523	26
Other	29,345	3,017	10	9,008	742	8	10,349	1,109	11	9,988	1,166	12
Don't know/ no answer	572	101	18	191	17	9	188	48	26	193	36	19

* Estimated at less than 50,000

[1] Persons 8 years old and older in the first grade, 9 years old or older in the second grade, etc.

[2] German, Italian, English, Scottish, Welsh, Irish, French, Polish, Russian, Greek, Portuguese.

[3] Mexican American, Chicano, Mexican, Mexicano, Puerto Rican, Cuban, Central/South American, Other Spanish.

[4] Chinease, Filipino, Japanese, Korean.

NOTES – Details may not add to totals because of rounding.
– This *July 1975 Survey of Languages*, a supplement to the Current Population Survey was conducted by the Bureau of the Census for the National Center for Education Statistics.

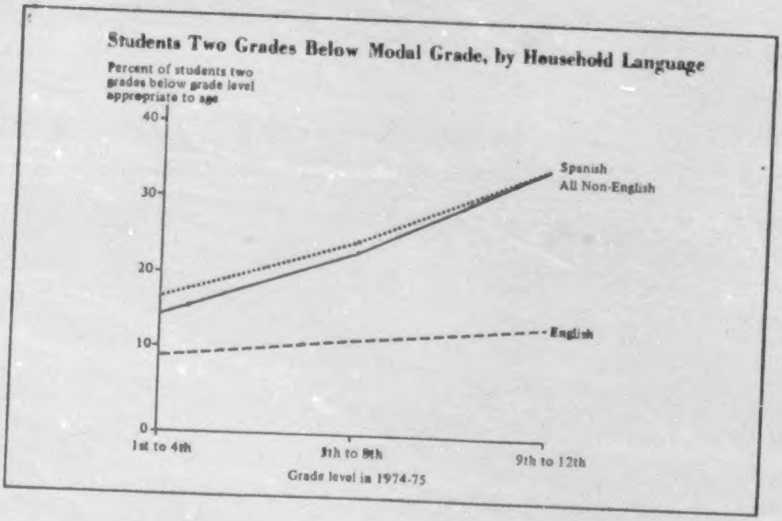
SOURCE: U.S. Department of Health, Education, and Welfare, National Center for Education Statistics, *July 1975 Survey of Languages*, preliminary data.

suggests that different policies of promotion are followed in the lower and upper grades. The situation for Spanish speaking people however, is far worse. From the first to the 12th grade, there is a continual rise from 12 to 25 percent of those who are two or more grades below mode. This is further reinforced by looking at the grade level in relations to household language (Figure 55). For those students whose household language is English, 9 to 12 percent are below grade throughout the grades. The rate for students for whom Spanish or some other non-English language is the household language rises steadily from 15 to 18 percent in grades 1 through 4 to 35 percent are below grade throughout the grades. The rate for students for whom Spanish or some other non-English language is the household language rises steadily from 15 to 18 percent in grades 1 through 4 to 35 percent below grade by the 12th grade.

A further association with not having a full command of English is the high school drop-out rate. According to the National Center of Statistics' report in 1975, Survey of Languages, "...about 10 percent of the school population 14 to 25 years old has completed less than four years of high school and were not enrolled during the 1974-75 school year. The rate was twice as great (24 percent) for those of Spanish origin and over four times as great (45 percent) for those who usually spoke Spanish (Figure 56).

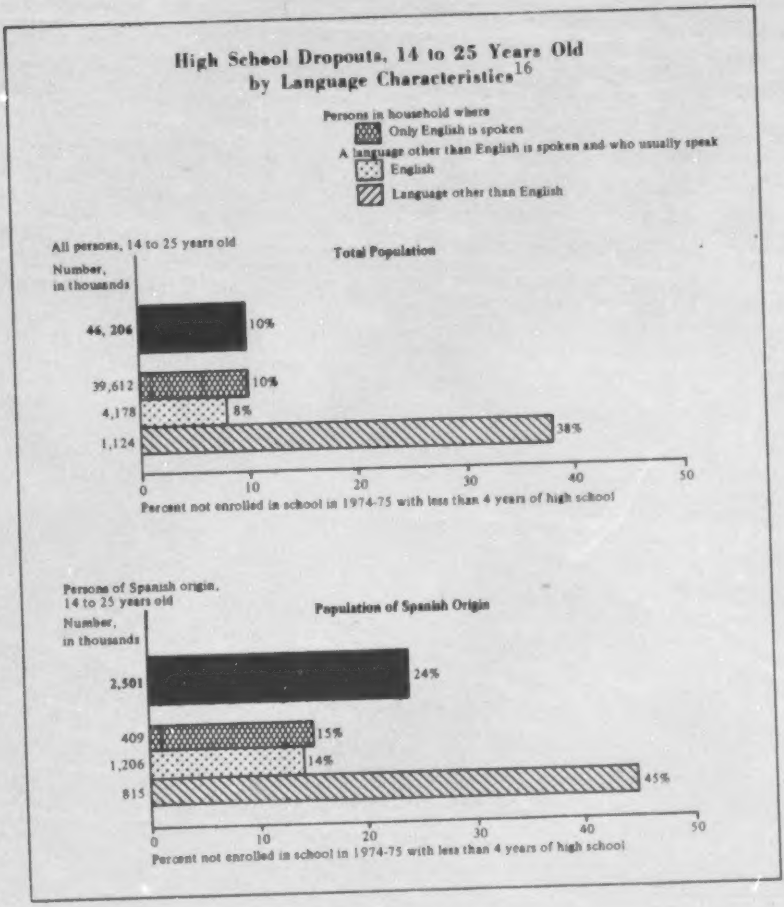
The relationships between immigration, foreign language, household language, and educational success raise to some high priority the question of the role, function, and style of bilingual education,

FIGURE 55



Students Two Grades Below Modal Grade, by Household Language

FIGURE 56



High School Dropouts, 14 to 25 Years Old by Language Characteristics[16]

Table 48

NON-ENROLLMENT STATUS OF THE POPULATION 3 TO 34 YEARS OLD, BY AGE, RACE, SPANISH ORIGIN: OCTOBER 1975 17/

Age, sex, race, and Spanish origin	Population	Not enrolled in school					
		Total		High school graduate		Not high school graduate	
		Number	Percent	Number	Percent	Number	Percent
SPANISH ORIGIN							
Total, 3 to 34 years	6,825	3,084	45.2	1,345	19.7	1,739	25.5
3 and 4 years	441	320	72.6	-	-	320	72.6
5 and 6 years	507	40	7.9	-	-	40	7.9
7 to 9 years	689	3	0.4	-	-	3	0.4
10 to 13 years	1,040	8	0.8	-	-	8	0.8
14 and 15 years	490	21	4.4	2	0.4	20	4.1
16 and 17 years	515	71	13.8	3	0.6	68	13.2
18 and 19 years	489	274	56.0	127	25.9	147	30.1
20 and 21 years	410	297	72.5	168	40.9	129	31.5
22 to 24 years	547	470	85.9	242	44.2	228	41.7
25 to 29 years	894	820	91.7	437	48.8	383	42.9
30 to 34 years	803	758	94.5	367	45.8	391	48.7
MEXICAN							
Total, 3 to 34 years	4,203	1,907	45.2	726	17.3	1,176	28.0
3 and 4 years	284	217	76.2	-	-	217	76.2
5 and 6 years	328	25	7.5	-	-	25	7.5
7 to 9 years	441	3	0.7	-	-	3	0.7
10 to 13 years	644	6	0.9	-	-	6	0.9
14 and 15 years	297	15	5.0	-	-	15	5.0
16 and 17 years	332	50	15.1	1	0.3	49	14.8
18 and 19 years	305	175	57.4	75	24.6	100	32.8
20 and 21 years	257	197	76.6	110	42.8	87	33.9
22 to 24 years	335	299	89.6	136	40.6	163	48.7
25 to 29 years	528	478	90.5	226	42.8	253	48.2
30 to 34 years	461	435	94.3	180	39.0	255	55.4
WHITE							
Total, 3 to 34 years	96,815	45,385	46.9	33,985	35.1	11,401	11.8
3 and 4 years	5,518	3,821	69.2	-	-	3,821	69.2
5 and 6 years	5,795	301	5.2	-	-	301	5.2
7 to 9 years	8,654	54	0.6	-	-	54	0.6
10 to 13 years	13,387	95	0.7	-	-	95	0.7
14 and 15 years	7,145	122	1.7	3	-	118	1.7
16 and 17 years	7,063	754	10.7	159	2.3	596	8.4
18 and 19 years	6,855	3,670	53.5	2,665	38.9	1,005	14.7
20 and 21 years	6,593	4,496	68.2	3,521	53.4	975	14.8
22 to 24 years	9,255	7,749	83.7	6,581	71.1	1,169	12.6
25 to 29 years	14,578	13,119	90.0	11,080	76.0	2,039	14.0
30 to 34 years	11,993	11,203	93.4	8,975	74.8	2,228	18.6
BLACK							
Total, 3 to 34 years	14,563	6,144	42.2	[illegible]	23.0	[illegible]	19.2
3 and 4 years	1,007	663	65.8	-	-	663	65.8
5 and 6 years	1,029	57	5.6	-	-	57	5.5
7 to 9 years	1,505	11	0.7	-	-	11	0.7
10 to 13 years	2,786	24	0.9	-	-	24	0.9
14 and 15 years	1,182	31	2.6	-	-	31	2.6
16 and 17 years	1,137	128	11.1	33	2.9	[illegible]	[illegible]
18 and 19 years	1,030	544	52.8	[illegible]	27.5	[illegible]	[illegible]
20 and 21 years	985	[illegible]	71.9	[illegible]	44.1	[illegible]	[illegible]
22 to 24 years	1,716	[illegible]	[illegible]	[illegible]	58.0	[illegible]	[illegible]
25 to 29 years	1,720	1,375	[illegible]	[illegible]	62.2	[illegible]	[illegible]
30 to 34 years	1,454	1,315	87.8	[illegible]	56.2	526	[illegible]

what it accomplishes, and what the opportunity costs are, i.e., what the student does not get at the price of bilingual teaching.

A further factor influencing the interpretation of these relationships is the long-term movement of the United States into an information-based society. In an information society, presumably the widest road to upward mobility is the ability to collect, handle, utilize, interpret and be facile with information, the bulk of which is in some printed form and in English.

The rates of non-enrollments in high school for Spanish origin, Mexican, whites and Blacks are shown in Table 48.

Behavior

The importance of cultural shock among immigrants of the Chinese communities, particularly in New York City, is clear. The influx of large numbers of youths from Hong Kong results in all of the classic dislocations of foreign language speaking, hard-to-acculturate students. The consequence is that what had been a model community, in terms of behavior, is experiencing an unfamiliar upswing in delinquency. One could anticipate the parallel and associated difficulties within the school system. Patterns of immigration, therefore, need to be better understood in terms of anticipating declining and growing needs of special services. Although the rate of immigration is low (Figure 3), because immigrants tend to collect in cities, one may anticipate continuing localized problems in already sorely troubled areas.

VI. LOCAL MOBILITY AND INTERNAL MIGRATION

America has always been a nation on the move. The pattern both in general and in detail is now undergoing substantial change. While population shifts can be measured at the national level with relatively high reliability, it is the details of these movements that are felt most palpably at the local level. For this reason internal migration is a crucial factor to understanding the demographic pressures on educational institutions in the United States. Local mobility and internal migration are perhaps the two most important factors in producing state, regional and local deviations from large-scale, national demographic trends.[1]

Convenient categories in which to examine the situation are:

- o Urban - suburban migration,
- o Metro - nonmetro migration,
- o Movement of industry,
- o Growth of the sunbelt,
- o Migration of racial groups, particularly Blacks, whites and Hispanics,
- o Distribution of population among the poor, the working class and the middle class.

A. Implications of Internal Migration for Elementary and Secondary School

1. Large central cities are becoming increasingly the centers of Black and other minority group populations. That is associated with white and more importantly middle-class dissatisfaction, the origins to which are only poorly understood. In any case

in the face of increasing dissatisfaction, there are only a small number of options open to the middle class:

- change of residence,
- withdrawal of pupil to either
  - private school or
  - parochial school,
- early graduation and entry into college which incidentally may stimulate certification processes to establish competence,
- tracking.

The sum of all of these processes is resegregation.

This partitioning of populations is further exacerbated by the movement of immigrant population into the large cities as discussed earlier.

2. Stabilizing and reversing these trends may be a major educational policy need which is now relatively latent but may become increasingly pressing.
3. Migration principally between metropolitan and nonmetropolitan areas is causing substantial growth, not only in nonmetropolitan counties on the perimeter of metropolitan areas, but also in other nonmetropolitan areas. The management of these growth centers from an educational point of view may present special problems because such growth is relatively unexpected. The tax base may be inadequate, the requirements and the amenities

of the new in-migrants may be substantially at odds with those of the local people.

4. Regional income equalization which has been a trend since at least 1929 may reduce interregional educational differences in terms of cost and quality of education.
5. Boom towns particularly in energy rich regions in the West and Appalachia will almost certainly create major planning needs and major local dislocations of educational systems if those plans are not adequate.
6. The upward shift in the price of energy may influence internal migration patterns in quite complex ways including reducing the attractiveness of nonmetropolitan areas and suburban areas.
7. A decline in test score performance is associated with children of migrant families irrespective of their socio-economic status.
8. In view of the relatively higher socio-economic status of migrant families, children in new communities may be anticipated, on the average, to score higher on standard tests.

B. The Overall Pattern

The historical, long-term pattern in the United States has been toward an increasely urban population. Seventy-three percent of the nation's population now lives in metropolitan areas which comprise approximately 14 percent of the nation's land area. The rural migration toward metropolitan areas seems, at least, for the moment, if not for a longer time, to have ceased and even reversed. From 1970 to 1974, the population growth of the rural areas was 5.6 percent. This is in contrast to 4 percent for the nation as a whole and 3.4 for metropolitan areas.

The same period saw a net out migration of 1.8 million people from metropolitan to nonmetropolitan areas. The eight largest metropolitan areas experienced a net out-migration of 1.2 percent. The next smaller metropolitan areas (between one and three million population) experienced an out migration of 0.3 percent.

One-tenth of the nation's 265 standard metropolitan statistical areas are now losing population; one out of every four Americans lives in a metropolitan area in decline. In the 1970-74 interval, populations of counties adjacent to metropolitan areas experienced a 6.2 percent increase.

In the employment area, there has been a 3.8 percent decline in metropolitan employment and a 1.5 percent increase in nonmetropolitan employment. The long-term decline of the Northeast, as an industrial and commercial area, goes back at least to the Great Depression. That loss of industrial primacy has been primarily to the benefit of the South and the West.[2]

The overall pattern of movement in the interval 1970-74 may be seen in Figure 57.

C. Metropolitan/Nonmetropolitan Migration

Calvin Beale of the USDA has recently reviewed the status of nonmetropolitan population growth since 1970. He makes the following key points especially with regard to the interval April 1970-July 1974 (Table 49).[3]

- Nonmetropolitan counties increased 5.6 percent while metropolitan counties increased only 3.4 percent.

Figure 57

Percent of Population Moving To, From, and Within SMSA's by Age: 1970-75[4]

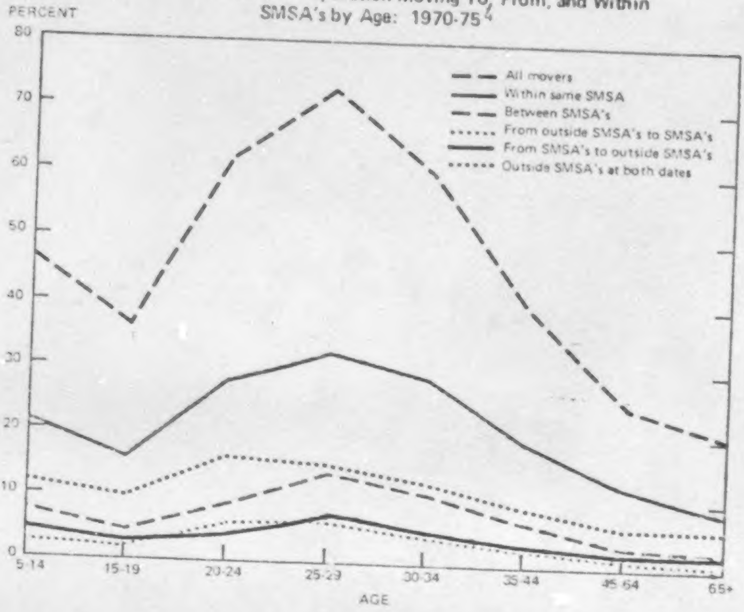


Table 49

Population Change by Metropolitan Status and Selected County Characteristics [5]

Item	Number of counties	Population					Net migration			
		Number			Percentage change		1970-74		1960-70	
		1974	1970	1960	1970-74	1960-70	Number	Rate 1/	Number	Rate 1/
	No.	- - - Thou. - - -			- - - Pct. - - -		Thou.	Pct.	Thou.	Pct.
Total United States	3,097	211,392	203,212	179,323	4.0	13.3	2,076	1.0	3,001	1.7
Metropolitan status: 2/										
Metropolitan counties	628	153,930	148,809	127,191	3.4	17.0	461	.3	5,959	4.7
Nonmetropolitan counties	2,469	57,463	54,404	52,132	5.6	4.4	1,614	3.0	-2,958	-5.7
Adjacent counties 3/	969	29,780	28,022	26,116	6.3	7.3	1,010	3.6	-705	-2.7
Nonadjacent counties	1,500	27,683	26,382	26,016	4.9	1.4	604	2.3	-2,253	-8.7
Entirely rural counties	623	4,618	4,353	4,548	6.1	-4.3	190	4.4	-553	-12.2
Characteristics of nonmetro counties in 1970:										
Counties with 10 percent or more net inmigration at retirement ages 4/	360	8,653	7,554	6,340	14.5	19.2	932	12.3	624	9.8
Counties with a senior State college	187	9,031	8,434	7,463	7.1	13.0	323	3.8	91	1.2
Counties with 30 percent or more employed in manufacturing	638	20,143	19,257	18,193	4.6	5.9	356	1.8	-746	-4.1
Counties with 30 percent or more employed in agriculture	331	2,062	2,057	2,305	.2	-10.7	-17	-.8	-412	-17.9
Population density per square mile in nonadjacent counties										
150 and over	15	1,176	1,124	1,020	4.6	10.2	17	1.5	-10	-1.0
100 to 149	35	1,929	1,842	1,699	4.8	8.4	18	1.0	-73	-4.3
75 to 99	61	2,781	2,674	2,568	4.0	4.1	20	.7	-170	-6.6
50 to 74	127	4,298	4,099	3,990	4.9	2.7	84	2.1	-313	-7.8
25 to 49	351	7,764	7,412	7,270	4.8	1.9	176	2.4	-541	-7.4
10 to 24	405	5,681	5,412	5,562	5.0	-2.7	177	3.3	-594	-10.5
Less than 10	506	4,054	3,820	3,907	6.1	-2.2	111	2.9	-561	-14.4

1/ Net migration expressed as a percentage of the population at beginning of period indicated. 2/ Metropolitan status as of 1974. 3/ Counties adjacent to Standard Metropolitan Statistical Areas of 1974. 4/ Counties with specified 1960-70 net inmigration rate for white persons 60 years old and over, 1970. Source: U.S. Census of Population: 1970 and Current Population Reports. U.S. Bureau of the Census.

- A net 1.6 million people moved into nonmetropolitan counties. This contrast with the net out-migration of 3 million in the 1960's from the same counties.
- All but two states--Rhode Island and Connecticut--show net retention or greater acquisition of population in nonmetropolitan areas in the 1970's.
- There is a phenomenon of adjacent counties to metropolitan areas undergoing growth. More than half of the total nonmetropolitan population is in these counties and their population increased by 6.2 percent.
- The growth rate of nonadjacent counties was also high, 4.9 percent.
- The nonmetropolitan counties that showed a most rapid growth were those that can be termed retirement counties. The 360 nonmetropolitan retirement counties' total population grew by 14.5 percent with net in migration of 932,000 people.
- The second most rapidly growing class of nonmetropolitan counties are those where senior state colleges are located. These counties include 9 million people and are basically exclusive of the retirement counties. They grew by 7.1 percent.

  Like the retirement counties, they had already been experiencing gains in the 1960's.
- In the 1960's one of the main economic trend was the decentralization of manufacturers, perhaps largely driven by the utilization of the underemployed nonmetropolitan labor force.

lower wage rates, better work attitudes, less unionization, availability of cheap land, improved transportation, and flight from urban problems.

Those counties with high dependence on manufacturing (30 percent or more of the jobs in 1970) had a 4.6% population increase in 1970-74. This has declined from 1967 when the growth in this area was 5.9%.

If one divides metropolitan areas between those with a population less than 750,000 and those with more, movement into metropolitan areas was confined to the smaller ones. Above this threshold the movement into metropolitan areas typically is reduced or negative. Small and medium size metropolitan areas are showing the same kinds of increases as non-metropolitan areas.

o The factors underlying these shifts seem to be:

  - closing the income gap
  - the absence of much further displacement from farming
  - the revival of mining
  - continued retirement to recreational, climatically favored areas
  - the downscaling of the residential aspects of the environmental ecological movement
  - certain anti-materialistic elements in the youth revolution
  - the unfavorable image of the city
  - the near elimination of former rural/urban gaps in material conveniences, such as water supply, plumbing, heating, electricity, roads, communication

- high cost of metropolitan housing
- emergence of an adequate system of post high school education in nonmetropolitan areas

o There seem to be some potential problems on the horizon with regard to further nonmetropolitan development, including high costs of gasoline. Rural folks travel more by car. This could inhibit immigration of families, especially young, child-bearing families. That in turn could reduce the growth of nonmetropolitan areas. Furthermore, the dropping of the birth rate may reduce the appeal of smaller communities for parents who are concerned for the welfare of their school-age children. The smaller school systems may offer less and therefore be less appealing.

D. The Distribution of Industry and Employment

Ledebur, in a study of the dynamics of change points out that during the 1960's, the nation had an average growth in manufacturing employment of 19.4 percent.[6] The Northeast increased only 11.8 percent, while the South and West grew 30 percent and 26 percent respectively. These latter two regions in the same decade grew in all industrial categories at a greater rate than in the North and at a greater rate than in the Northeast and North Central regions (with the exception of construction and mining in the West).

From 1970 to 1972, private sector metropolitan employment decreased 3.9 percent while rural employment increased 1.5 percent. The overall pattern of employment change is shown in Table 50 as a result of birth, death, migration and expansion and contraction of firms (not people). Ledebur points out that the overall increase in rural jobs derives from trade and service sectors since there has been a net decrease and manufacturing in both urban and rural areas. Table 51 displays the same data by major regional breakdown.

One of the long-term consequences of economic development in the South and West is the trend toward regional equalization of incomes (Figure 58 and 59). This is most sharply seen and most generally brought to public awareness in terms of the growth of the so-called "sunbelt" (Figure 60). The "sunbelt" as a growth region is more properly a broad band running through the South and the far West. Figure 61a illustrates growth of the sunbelt. This is, to some extent, due to individual migration which involves higher income people, but is perhaps more directly attributable to industrial migration and industrialization of previously less economically progressive areas. Regional income equalization trends may effectively undercut any major policy concerns over regional disparities of funds available per child, on a state basis. The grossest implication for public policy is that any measures directed at equalization might best be perceived as short term rather than permanent programs and, hence, as subjects for marginal rather than central Federal initiatives.

The interregional equalization that might be anticipated from growing convergence of income is not yet clearly manifest in the available data on school costs. Table 52 shows the changes in school expenditures per pupil between 1969-70 and 1970-74. The Southeast has the lowest increased expenditures. The actual expenditures for 1973-74 per pupil are shown in Table 53.

TABLE 50

Average Components of Employment Change
for Metropolitan and Rural Areas
by Region, 1970-72
(in percent)[7]

Metropolitan

	NET CHANGE	BIRTHS	DEATHS	EXPANSION	CONTRACTION	INMIG.	OUTMIG.
Northeast	-6.6	4.5	-12.1	10.9	-9.9	0.2	-0.3
North Central	-4.3	4.5	-10.2	10.6	-9.3	0.2	-0.2
South	-0.0	7.8	-11.6	13.6	-9.9	0.3	-0.2
West	-3.5	6.7	-13.9	14.2	-10.7	0.3	-0.2

Rural

	CHANGE	BIRTHS	DEATHS	EXPANSION	CONTRACTION	INMIG.	OUTMIG.
Northeast	-2.3	5.4	-13.2	13.6	-8.2	0.3	-0.2
North Central	1.4	6.6	-12.7	15.9	-8.5	0.3	-0.2
South	1.2	7.4	13.9	15.6	-8.0	0.4	-0.2
West	7.7	10.4	-14.8	21.6	-9.6	0.3	-0.2

TABLE 51

Average Components of Employment Change for Metropolitan and Rural Areas by Industry, 1970-72 [a]

(In percents)

Agriculture

	NET CHANGE	BIRTHS	DEATHS	EXPAND.	CONTRCT.	INMIG.	OUTMIG.
METRO	-3.6	3.8	-7.7	15.9	-16.5	1.1	-0.3
RURAL	-1.7	5.0	-10.4	18.1	-14.3	0.1	-0.1

Manufacturing

	NET CHANGE	BIRTHS	DEATHS	EXPAND.	CONTRCT.	INMIG.	OUTMIG.
METRO	-10.0	3.0	-11.8	9.1	-10.2	0.2	-0.2
RURAL	- 5.5	3.5	-12.3	11.3	-8.1	0.4	-0.2

Other Industry

	NET CHANGE	BIRTHS	DEATHS	EXPAND.	CONTRCT.	INMIG.	OUTMIG.
METRO	-2.7	6.3	-11.3	15.0	-12.7	0.2	-0.2
RURAL	0.2	6.9	-13.7	18.3	-11.4	0.5	-0.4

Trade

	NET CHANGE	BIRTHS	DEATHS	EXPAND.	CONTRCT.	INMIG.	OUTMIG.
METRO	2.7	10.9	-15.3	15.1	-7.9	0.2	-0.2
RURAL	14.0	14.3	-16.7	22.8	-6.4	0.2	-0.2

Service

	NET CHANGE	BIRTHS	DEATHS	EXPAND.	CONTRCT.	INMIG.	OUTMIG.
METRO	1.6	4.7	-7.1	12.6	-8.7	0.3	-0.3
RURAL	8.3	9.2	-11.2	20.9	-10.7	0.2	-0.1

Total

	NET CHANGE	BIRTHS	DEATHS	EXPAND.	CONTRCT.	INMIG.	OUTMIG.
METRO	-3.9	5.6	-11.7	12.0	-9.8	0.2	-0.2
RURAL	1.5	7.3	-13.6	16.1	-8.4	0.3	-0.2

FIGURE 58

CLOSING THE REGIONAL INCOME GAP
(1929-1974)[9]

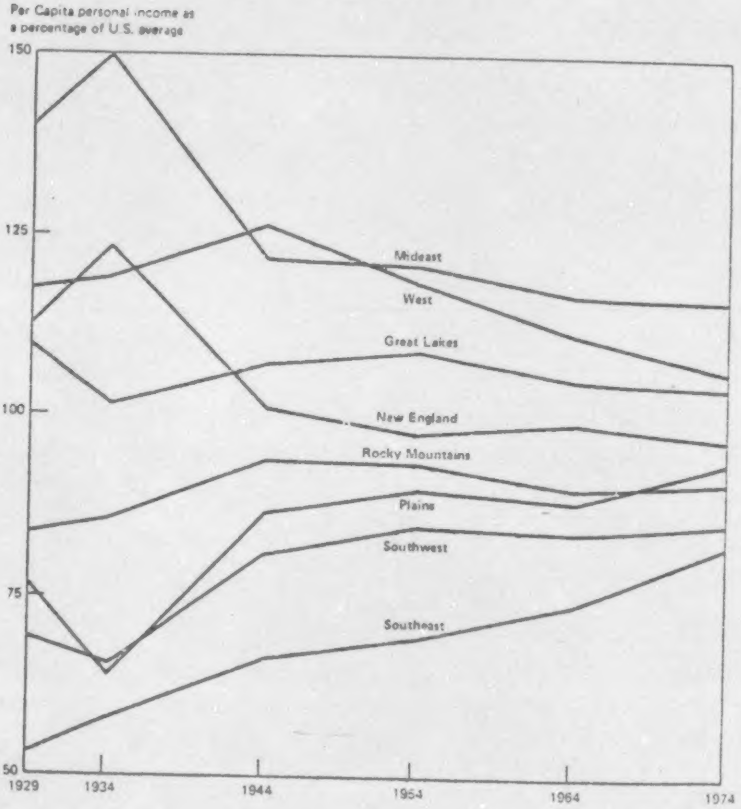


FIGURE 59

PERCENTAGE POINT CHANGE IN PER CAPITA PERSONAL INCOME AS A PERCENT OF U.S. AVERAGE 1929-1974 10

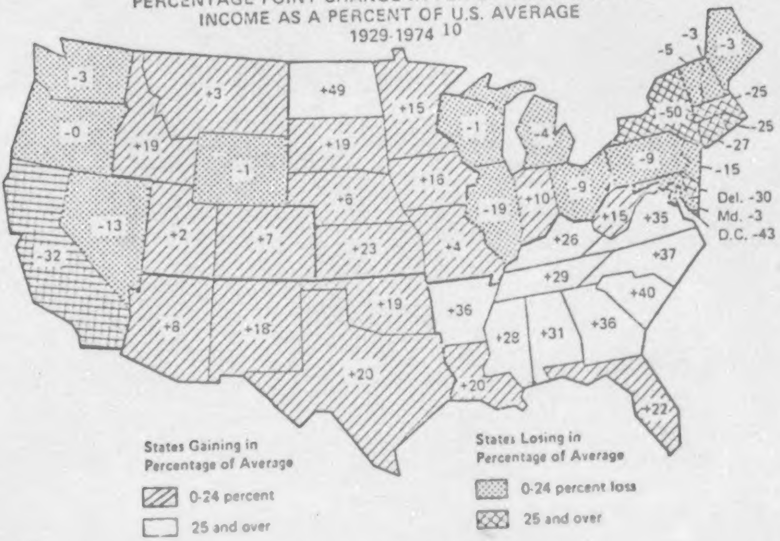

-3
+3
+49
+15
-3
-5
-3
-0
+19
-1
+19
-1
-4
-50
-25
-25
-27
+16
-9
-9
-15
+6
-19
+10
Del. -30
-13
+2
+7
+23
+4
+26
+15
+35
Md. -3
D.C. -43
-32
+37
+29
+19
+36
+40
+8
+18
+36
+28
+31
+20
+20
+22
States Gaining in Percentage of Average
0-24 percent
25 and over
States Losing in Percentage of Average
0-24 percent loss
25 and over

FIGURE 60

METROPOLITAN AREAS WITH POPULATION INCREASES OF TWELVE PERCENT OR MORE: 1970 TO 1974[11]

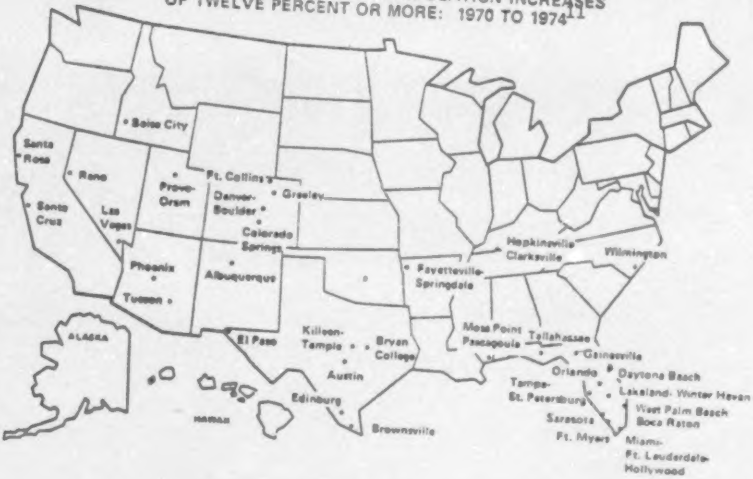

Boise City
Santa Rosa
Reno
Provo-Orem
Ft. Collins
Greeley
Denver-Boulder
Santa Cruz
Las Vegas
Colorado Springs
Phoenix
Albuquerque
Tucson
ALASKA
HAWAII
El Paso
Killeen-Temple
Bryan College
Austin
Edinburg
Brownsville
Hopkinsville Clarksville
Wilmington
Fayetteville-Springdale
Moss Point Pascagoula
Tallahassee
Gainesville
Orlando
Daytona Beach
Tampa-St. Petersburg
Lakeland- Winter Haven
West Palm Beach Boca Raton
Sarasota
Ft. Myers
Miami-Ft. Lauderdale-Hollywood

FIGURE 61a

AVERAGE ANNUAL PERCENT CHANGE IN POPULATION FOR CENSUS DIVISIONS 1960 TO 1970 AND 1970 TO 1974[12]

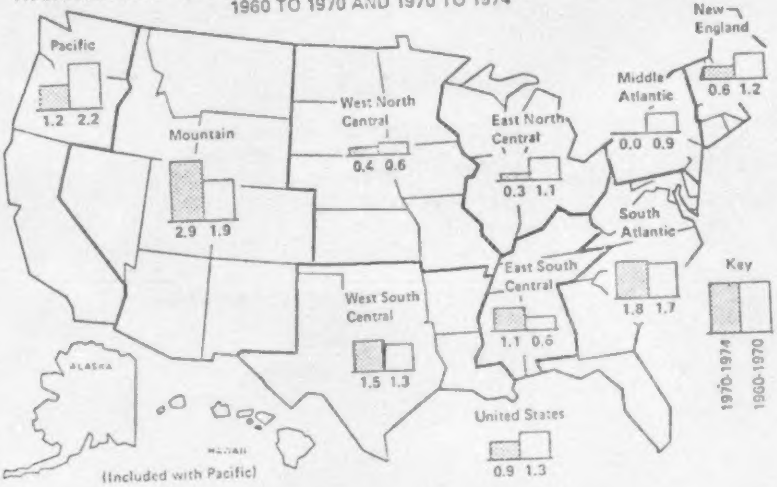

New England
0.6 1.2
Middle Atlantic
0.0 0.9
Pacific
1.2 2.2
Mountain
2.9 1.9
West North Central
0.4 0.6
East North Central
0.3 1.1
South Atlantic
1.8 1.7
East South Central
1.1 0.6
West South Central
1.5 1.3
United States
0.9 1.3
Key
1970-1974
1960-1970
ALASKA
HAWAII
(Included with Pacific)

FIGURE 61b

ESTIMATES OF THE RESIDENT POPULATION OF REGIONS: 1970 to 1975

(Numbers in thousands)[13]

REGION	July 1, 1975 (provisional)	April 1, 1970 (Census)	CHANGE 1970 to 1975 Number	CHANGE 1970 to 1975 Percent
UNITED STATES	213,121	207,304	9,817	4.8
Northeast	49,461	49,061	401	0.8
North Central	57,669	56,593	1,076	1.9
South	68,113	62,812	5,301	8.4
West	37,878	34,838	3,039	8.7

TABLE 52

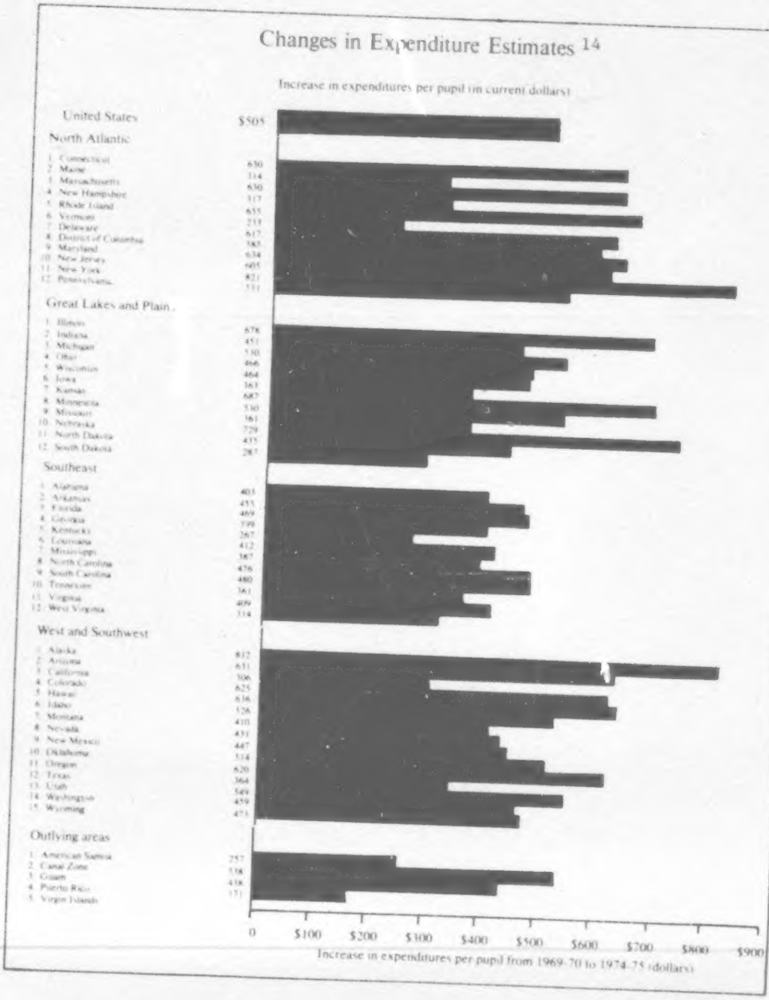

Changes in Expenditure Estimates 14
Increase in expenditures per pupil (in current dollars)
United States
$505
North Atlantic
1. Connecticut
2. Maine
3. Massachusetts
4. New Hampshire
5. Rhode Island
6. Vermont
7. Delaware
8. District of Columbia
9. Maryland
10. New Jersey
11. New York
12. Pennsylvania
630
314
630
317
635
233
617
583
634
605
821
531
Great Lakes and Plains
1. Illinois
2. Indiana
3. Michigan
4. Ohio
5. Wisconsin
6. Iowa
7. Kansas
8. Minnesota
9. Missouri
10. Nebraska
11. North Dakota
12. South Dakota
678
451
530
466
464
363
687
530
361
729
435
287
Southeast
1. Alabama
2. Arkansas
3. Florida
4. Georgia
5. Kentucky
6. Louisiana
7. Mississippi
8. North Carolina
9. South Carolina
10. Tennessee
11. Virginia
12. West Virginia
403
455
469
339
267
412
387
476
480
361
409
314
West and Southwest
1. Alaska
2. Arizona
3. California
4. Colorado
5. Hawaii
6. Idaho
7. Montana
8. Nevada
9. New Mexico
10. Oklahoma
11. Oregon
12. Texas
13. Utah
14. Washington
15. Wyoming
812
631
306
625
636
528
410
431
447
514
620
364
549
459
473
Outlying areas
1. American Samoa
2. Canal Zone
3. Guam
4. Puerto Rico
5. Virgin Islands
257
538
438
171
0
$100
$200
$300
$400
$500
$600
$700
$800
$900
Increase in expenditures per pupil from 1969-70 to 1974-75 (dollars)

TABLE 53

Distribution of School Systems, by Current Expenditures[15]

State	Total operating systems	Percent distribution of expenditures per pupil							Median expenditure per pupil
		Total	less than $700	$700 to $899	$900 to $1,099	$1,100 to $1,299	$1,300 to $1,499	$1,500 or more	
U.S. total	16,338	100.00	12.05	22.60	27.43	18.79	9.89	9.22	$1,008
Alabama	126	100.00	62.16	35.86	0	1.98	0	0	669
Alaska	32	100.00	0	0	0	0	0	100.00	2,263
Arizona	276	100.00	9.51	37.49	27.24	2.70	19.82	3.24	912
Arkansas	383	100.00	43.14	33.80	18.76	4.30	0	0	739
California	1,045	100.00	8.11	18.79	24.32	19.79	18.95	10.03	1,094
Colorado	181	100.00	0	15.59	20.05	25.62	11.14	27.60	1,236
Connecticut	165	100.00	1.31	5.02	33.79	33.03	11.88	14.97	1,143
Delaware	24	100.00	0	3.85	46.15	34.61	3.85	11.55	1,112
District of Columbia	1	100.00	0	0	0	0	100.00	0	1,482
Florida	67	100.00	0	16.85	54.71	19.35	9.09	0	991
Georgia	188	100.00	39.59	37.34	19.62	2.07	0	1.38	761
Hawaii	1	100.00	0	0	0	0	100.00	0	1,302
Idaho	115	100.00	8.19	53.99	21.77	4.06	0	11.99	831
Illinois	1,057	100.00	2.73	14.83	25.51	30.78	18.46	7.71	1,128
Indiana	304	100.00	5.77	58.24	30.81	4.83	0.34	0	837
Iowa	451	100.00	0	2.18	44.67	48.86	4.29	0	1,106
Kansas	309	100.00	0.29	9.63	30.59	27.37	15.55	16.58	1,165
Kentucky	188	100.00	24.25	51.13	23.25	1.36	0	0	755
Louisiana	66	100.00	0	35.21	60.38	4.40	0	0	938
Maine	230	100.00	9.61	42.25	26.88	6.70	12.56	1.98	891
Maryland	24	100.00	0	0	54.55	40.91	0	4.55	1,077
Massachusetts	356	100.00	0.28	0.96	26.84	33.70	26.76	11.47	1,234
Michigan	593	100.00	8.15	22.04	40.78	17.11	10.06	1.88	1,005
Minnesota	438	100.00	0	1.01	33.08	48.14	16.81	0.96	1,150
Mississippi	150	100.00	53.62	45.03	1.35	0	0	0	634
Missouri	576	100.00	12.28	18.62	45.70	20.64	1.95	0.82	990
Montana	650	100.00	34.61	19.19	8.47	30.35	0.94	6.44	869
Nebraska	1,281	100.00	30.56	13.06	26.23	10.17	2.58	17.40	958
Nevada	17	100.00	0	0	32.53	39.03	28.44	0	1,153
New Hampshire	156	100.00	11.07	57.35	23.92	6.86	0.79	0	818
New Jersey	579	100.00	6.41	4.98	14.48	24.35	28.37	21.42	1,290
New Mexico	88	100.00	0.50	35.48	25.62	36.71	1.18	0.50	974
New York	734	100.00	2.02	0.90	0.14	10.26	33.10	53.57	1,515
North Carolina	150	100.00	1.36	39.81	53.45	5.39	0	0	924
North Dakota	336	100.00	3.81	33.56	32.09	14.29	8.13	8.10	976
Ohio	621	100.00	15.36	59.70	18.33	4.05	1.91	0.64	818
Oklahoma	637	100.00	32.56	32.01	21.29	1.64	0.65	11.86	765
Oregon	338	100.00	0	3.22	51.13	20.34	19.20	6.11	1,054
Pennsylvania	504	100.00	0.94	4.18	54.09	32.00	5.61	3.18	1,075
Rhode Island	40	100.00	0	0	16.37	64.93	14.03	4.68	1,237
South Carolina	93	100.00	43.14	53.06	3.79	0	0	0	721
South Dakota	220	100.00	3.61	33.66	37.05	16.16	5.21	4.31	960
Tennessee	146	100.00	60.51	29.41	9.24	.84	0	0	663
Texas	1,120	100.00	17.66	46.08	15.45	9.24	8.80	2.78	854
Utah	40	100.00	0	31.53	39.03	2.43	27.01	0	1,000
Vermont	245	100.00	12.58	31.32	32.35	13.28	4.80	5.68	922
Virginia	134	100.00	.80	43.68	48.27	4.02	0.80	2.41	907
Washington	314	100.00	0	7.19	50.61	37.45	0.96	3.79	1,085
West Virginia	55	100.00	0	52.33	47.67	0	0	0	895
Wisconsin	434	100.00	0.51	7.73	35.81	43.92	8.29	3.72	1,130
Wyoming	60	100.00	0	1.48	13.33	35.22	11.85	38.13	1,291

E. Boom Towns

While it is not clear at this point where and to what extent new energy and material reserves will be open to major exploitation, almost certainly this will occur on a large scale in the next two decades. Consequently, there is little doubt that there will be boom towns in many places. Boom will place enormous stresses on the local and even state infrastructure, particularly in the sparsely populated Western states and possibly in the coal regions of the East. Special attention should accompany the educational planning of these areas, taking into account the needs, the resources, the culture, the lifestyle of the indigenous people, as well as the needs of potentially discordant attitudes and cultural backgrounds of the new comers. The boom town creates important but specialized and highly localized problems. Virtually nothing has been done in the educational aspect of this problem. With regard to fossil energy resources alone, the candidate areas where boom towns may occur include:

- Kentucky
- Southern Illinois
- Colorado
- Wyoming
- Montana
- North Dakota

The boom town phenomenon may be of a more classical form in the Western states where the local infrastructure is small and fragile, in the states which are relatively sparsely populated. On the other hand, even in the established communities of Kentucky and Illinois an expansion in coal exploitation could stress the much more elaborate existing infrastructure to a substantial degree.

F. Urban/Suburban Partitioning

The migration into and out of cities, particularly between cities and suburbs, should be a major public policy concern since the patterns of migrations around large cities is largely one of white middle-class out-migration leaving poor, largely Black and Hispanic-American populations behind. Table 54 shows the racial distribution in major standard metropolitan statistical areas since 1900. Figure 62 shows the net migration for eight major metropolitan areas between 1960 and 1974.

The implications of these trends are several-fold.

First is the shift in available tax-base within the large metropolitan cities to cope with the relatively greater demands for educational service by the poor.

There has been a major dollar drain, between the years 1970-74, from the major cities of the United States--a net loss of $29.6 billion in aggregate income from out-migration. Immigrants in cities had a net income of 25.7 billion; emigrants from cities had a net income of 55.3 billion (Table 55).

The long-term significance of this flow and whether it is in fact a long-term flow merits close and careful attention, but it certainly sheds a bright beam of light on the fiscal crises in large cities and hence on the derivative limitations in discretionary funds for education.

TABLE 54

Distribution of the Metropolitan Population by Residence in and Outside Central Cities, by Race, 1900-74[16]

Year	Combined			White			Black		
	Total	Central City	Outside	Total	Central City	Outside	Total	Central City	Outside
SMSA as of 1960 (1960 areas)*									
1900	100.0	62.2	37.8	100.0	62.8	37.2	100.0	54.5	45.5
1910	100.0	64.6	35.4	100.0	64.9	35.1	100.0	60.4	39.6
1920	100.0	66.0	34.0	100.0	65.9	34.1	100.0	67.2	32.8
1930	100.0	64.6	35.4	100.0	63.9	36.1	100.0	72.8	27.2
1940	100.0	62.7	37.3	100.0	61.6	38.4	100.0	74.6	25.4
1950	100.0	58.7	41.3	100.0	56.6	43.4	100.0	77.2	22.8
1960	100.0	51.4	48.6	100.0	47.8	52.2	100.0	79.6	20.4
1970	100.0	47.2	52.8	100.0	42.3	57.7	100.0	79.9	20.1
SMSAs as of 1970									
1970	100.0	45.9	54.1	100.0	41.1	58.9	100.0	79.0	21.0
1974	100.0	43.4	56.6	100.0	38.1	61.9	100.0	77.5	22.5

FIGURE 62

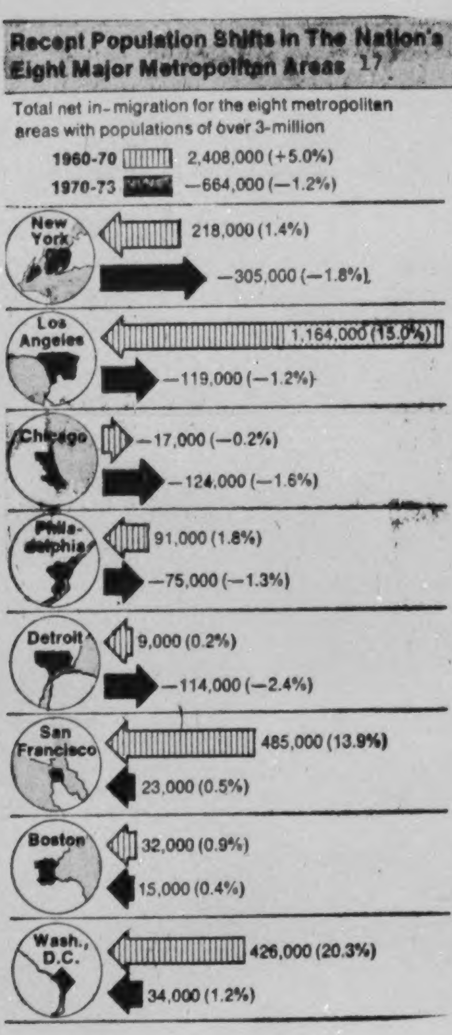

Recent Population Shifts In The Nation's Eight Major Metropolitan Areas 17
Total net in-migration for the eight metropolitan areas with populations of over 3-million
1960-70 2,408,000 (+5.0%)
1970-73 —664,000 (—1.2%)
New York
218,000 (1.4%)
—305,000 (—1.8%)
Los Angeles
1,164,000 (15.0%)
—119,000 (—1.2%)
Chicago
—17,000 (—0.2%)
—124,000 (—1.6%)
Phila-delphia
91,000 (1.8%)
—75,000 (—1.3%)
Detroit
9,000 (0.2%)
—114,000 (—2.4%)
San Francisco
485,000 (13.9%)
23,000 (0.5%)
Boston
32,000 (0.9%)
15,000 (0.4%)
Wash., D.C.
426,000 (20.3%)
34,000 (1.2%)

TABLE 55

INCOME IN 1973 OF FAMILIES AND UNRELATED INDIVIDUALS 14 YEARS OLD AND OVER WHO MIGRATED TO AND FROM CENTRAL CITIES BETWEEN 1970 AND 1974

Subject	Living in cities in 1970	Moved out of cities between 1970 and 1974	Moved to cities between 1970 and 1974	Net change between 1970 and 1974
Families............................(thousands)..	16,823	3,363	1,563	-1,800
Mean income.........................(dollars)..	$13,349	$14,169	$12,864	-$1,305
Aggregate income..........(billion dollars)..	$224.6	$47.7	$20.1	-$27.6
Unrelated individuals.............(thousands)..	6,975	1,066	926	-140
Mean income.........................(dollars)..	$6,134	$7,099	$6,092	-$1,007
Aggregate income..........(billion dollars)..	$42.8	$7.6	$5.6	-$2.0

Secondly, the movement of the relatively wealthy to the suburbs and the attention to their immediate educational needs may engender reluctance to have their state funds allocated to educating children in other communities. Long-term effects of this may be seen within the cities in terms of a degenerative cycle. As the quality of the public schools declines, either an out-migration to the suburbs will occur or the resident middle-class will send their children to private schools. The net overall effect may be the death of a major social institution, namely, the public school system. The question facing the nation is whether we can sustain two school systems--one private (or public suburban), supported by a white prosperous middle class, and the other urban public catering to a poor underclass? More details on public and private school are given in Sections IX and X.

Long has presented data on the migration patterns in and around eleven major cities. His data, Tables 56-58, show that the principal factors in this migration are the shifting of whites and, to a substantially smaller extent, the immigration of Blacks or the higher birth rates among Blacks. Out-migrations of whites is the dominant factor in the increasing percent of Blacks in big cities.

The general trend of white out-migration and a stable minority population is borne out in a study in Racine, Wisconsin. A sample of the Mexican-American, Black and Anglo populations were studied in 1960 with regard to the question of minority migrants and the urban community. Ten years later the study team was able to resurvey the location of a portion of their original sample. In general they found that within the five major residential classes in Racine, Mexican-Americans had left areas that contained Mexican-Americans and Blacks and moved into other areas already containing persons of both groups. Blacks moved from very heavily populated Black areas to other areas already containing sizeable percentages of Black, but Anglos, in contrast, moved out of areas that contain sizeable Black, and Mexican-American populated areas into areas that were predominately Anglo.

Table 59 shows that when the whites moved out of Racine they tended to move at a higher percentage than Mexican-Americans or Blacks into suburban Racine or other parts of the United States. Blacks tended to remain in the city, and the Mexican-American behavior was intermediate.

An out-migration of whites in the 25 to 34 age category and the 5 to 14 age category and an in-migration of young adults can be seen in Figure 57.

The attractiveness of the city for career entry and its excitement as a place to go, appears to hold for whites until the first child is born. The demographic differences and the potential out-migration to rural nonmetropolitan areas is less clear in its implications for education and does merit some study. Calvin Beale has pointed out a possible trend reversal, namely, that with smaller numbers of children in the population, a current trend toward nonmetropolitan migration may decline since a good environment for school age children is a major factor in the emigration of young couples from the city.[19]

Long's work makes it rather clear that the education levels of migrants is higher than average.[20] A tendency to migrate long-distance for jobs is more common among the educated than among the less educated. Also shown in his data, supporting a common but hitherto unsustained opinion, is the fact that moving tends to interfere with a child's school performance. In general, children of all economic groups suffer from migration. Since

TABLE 56

RISES IN THE PERCENT OF POPULATION OTHER THAN WHITE AND COMPONENTS OF THE RISE, 11 CITIES: 1950–60 AND 1960–70[21]

	New York City	Phila-delphia	Balti-more	Washing-ton, D.C.	St. Louis	New Orleans	Detroit	Chicago	Cleve-land	Atlanta	Los Angeles
Percent other than white:											
1950	9.8	18.3	23.8	35.4	18.0	32.0	16.4	14.1	16.4	36.6	10.8
1960	14.7	26.7	35.0	54.8	28.8	37.4	29.2	23.6	28.9	38.3	16.8
1970	22.8	34.1	46.9	72.1	41.3	45.4	44.5	34.4	39.0	51.6	22.8
Percent of 1950–60 rise in percent other than white due to:											
(1) Higher rate of natural increase among races other than white	30.2	28.3	27.8	21.3	21.4	53.7	19.2	27.8	20.3	[a]	32.3
(2) Immigration of races other than white	35.4	24.9	22.7	17.2	15.2	2.6	25.1	32.9	32.1	[a]	67.7[b]
(3) Outmigration of whites	34.4	46.8	49.5	61.5	63.4	43.7	55.7	39.3	47.6	[a]	
Percent of 1960–70 rise in percent other than white due to:											
(1) Higher rate of natural increase among races other than white	27.5	30.0	35.4	27.4	26.9	37.4	18.0	29.8	18.8	19.5	37.1
(2) Immigration of races other than white	44.3	13.7	14.4	9.1	73.1[c]	62.6[c]	22.8	19.0	81.2[c]	25.1	56.5
(3) Outmigration of whites	28.1	56.3	50.2	63.5			59.1	51.1		55.3	6.4

Sources: Data from Bowles and Tarver [1965], U. S. Bureau of the Census [1971], and estimates prepared by the author.

[a] Extensive annexation during the 1950–60 decade prohibit accurate estimation of natural increase and net migration.

[b] Percent of rise due to higher rate of immigration of races other than white.

[c] Percent of rise due to higher rate of outmigration of whites.

TABLE 57

RATE OF POPULATION CHANGE DUE TO NATURAL INCREASE AND NET MIGRATION, FOR 11 CITIES: 1950-60 AND 1960-70 [22]

	New York City	Phila-delphia	Balti-more	Washing-ton, D.C.	St. Louis	New Orleans	Detroit	Chicago	Cleve-land	Atlanta	Los Angeles
Rate of population change due to natural increase											
White											
1950-60	0.073	0.072	0.057	0.076	0.093	0.121	0.116	0.089	0.114	a	0.106
1960-70	0.051	0.038	0.036	0.005	0.025	0.056	0.036	0.052	0.067	0.074	0.078
Other races											
1950-60	0.253	0.248	0.221	0.284	0.268	0.278	0.323	0.334	0.328	a	0.337
1960-70	0.244	0.132	0.269	0.219	0.201	0.158	0.180	0.249	0.267	0.197	0.253
Rate of population change due to migration											
White											
1950-60	-0.140	-0.205	-0.244	-0.409	-0.332	-0.109	-0.350	-0.215	-0.299	a	0.070
1960-70	-0.133	-0.163	-0.249	-0.392	-0.340	-0.231	-0.327	-0.238	-0.331	-0.274	-0.023
Other races											
1950-60	0.218	0.164	0.172	0.189	0.131	0.008	0.290	0.310	0.367	a	0.637
1960-70	0.324	0.062	0.066	0.083	-0.012	-0.050	0.200	0.135	-0.011	0.175	0.287

Source: See Table I.

[a] Boundary annexations during the 1950-60 decade prohibit reliable estimation of natural increase and net migration.

4

TABLE 58

CHANGES IN THE PERCENT OF POPULATION OTHER THAN WHITE IN 11 SMSAS OUTSIDE THE CENTRAL CITY: 1950–60 AND 1960–70[a] 23

	New York, N.Y.	Philadelphia, Pa.–N.J.[b]	Baltimore, Md.	Washington, D.C.–Md.–Va.	St. Louis, Mo.–Ill	New Orleans, La.	Detroit, Mich.	Chicago, Ill.	Cleveland, Ohio	Atlanta, Ga.	Los Angeles, Calif.
Percent other than white:											
1950	4.5	6.3	10.2	8.7	1.3	15.6	5.1	2.9	0.9	13.0	2.9
1960	5.0	5.7	6.9	6.5	1.2	14.3	3.8	3.1	0.3	8.6	4.7
1970	6.3	6.1	6.2	8.9	1.3	11.8	3.9	3.5	4.0	6.3	8.4
Rate of population change due to natural increase											
White											
1950–60	0.190	0.183	0.238	0.374	0.213	0.353	0.320	0.214	0.189	[c]	0.202
1960–70	0.102	0.137	0.160	0.387	0.132	0.229	0.168	0.144	0.105	0.213	0.122
Other races											
1950–60	0.259	0.224	0.217	0.765	0.251	0.468	0.368	0.444	0.222	[c]	0.480
1960–70	0.264	0.124	0.188	0.233	0.136	0.434	0.256	0.380	0.745	0.242	0.390
Rate of population change due to migration											
White											
1950–60	0.551	0.328	0.554	0.626	0.323	0.775	0.493	0.487	0.477	[c]	0.395
1960–70	0.144	0.260	0.232	0.613	0.231	0.270	0.118	0.202	0.123	0.510	0.018
Other races											
1950–60	0.724	0.118	−0.048	0.235	0.051	0.451	−0.034	0.400	0.395	[c]	1.207
1960–70	0.331	0.232	0.046	0.767	0.347	0.066	0.048	0.149	4.281	0.006	0.732

Source: See Table 1.

[a] SMSAs are defined as of 1960.

[b] Camden Co., N.J., included with Philadelphia Co., Pa., to form central city.

[c] Extensive annexations during the 1950–60 decade prohibit reliable estimation of natural increase and net migration.

TABLE 59

RESIDENTIAL LOCATION OF 1960 SAMPLE OF MEXICAN-AMERICAN, BLACKS AND ANGLOS OF RACINE, WISCONSIN, TEN YEARS LATER (1970)[24]

	TOTAL NUMBER IN 1960 SAMPLE	NUMBER RESIDING IN RACINE IN 1970	SUBURBAN RACINE	OTHER MIDWEST LOCATION	OTHER USA LOCATION
ANGLOS	376	311	49	4	12
MEXICAN-AMERICANS	247	215	13	8	11
BLACKS	263	253	6	4	--

there is such a differentially high percent of the prosperous among migrants, one would expect new communities, on the average, to have higher scores in such things as SAT's (Table 60).

Gary Orfield of the Brookings Institute has extensively reviewed, as of 1976, the research on outmigration of whites from cities, and he concludes:[25]

> All we have now are preliminary studies, some national, some local, employing very different kinds of data and based on different analytic assumptions. Though the evidence raises important questions, it is impossible now to demonstrate that school integration, in itself, causes substantial white flight.

The number of factors influencing shifting populations are so numerous that no definitive position is justified with regard to which effect leads to which consequence, or which consequence is, in fact, a cause. Orfield identifies ten major factors influencing the distribution of white and Black, urban and suburban population:

- record levels of housing construction, overwhelmingly concentrated in the suburbs;
- major urban riots;
- rapid continued movement of urban jobs to suburban facilities;
- trend toward racial polarization in city politics and the emergence of black political leaders;
- increasing crime and public fears of violence;
- more rapid expansion of ghetto boundaries made possible by 1968 federal "fair housing" laws;
- increases in strikingly disproportionate central city taxation in some cities.

TABLE 60

Children 8 to 17 Years Old—Percent Enrolled in School and Percent Enrolled At, Above, and Below Modal Grade for Age, According to Age, Whether Living with Both Parents, and Number of States Lived in: April 1970 26

	Total number (000's)	Percent enrolled	Percent of Enrolled: Below mode for age	Percent of Enrolled: At mode for age	Percent of Enrolled: Above mode for age
Living with Both Parents					
Children 8 to 11 years old					
Lived in one state	10,275	98.2	14.4	69.6	16.1
Lived in two states	1,951	98.4	14.6	70.6	14.8
Lived in three or more states .	372	99.0	13.2	72.7	14.1
Children 12 to 15 years old					
Lived in one state	9,887	97.5	17.3	66.3	16.4
Lived in two states	2,051	97.8	16.9	67.6	15.5
Lived in three or more states .	327	98.3	15.4	70.1	14.5
Children 16 and 17 years old					
Lived in one state..........	3,296	92.8	18.9	69.4	11.7
Lived in two states	704	93.3	18.5	70.3	11.2
Lived in three or more states .	91	94.5	16.8	72.5	10.8
Other Children in Families					
Children 8 to 11 years old					
Lived in one state..........	1,833	95.6	20.6	59.5	19.9
Lived in two states	370	94.8	19.6	62.8	17.6
Lived in three or more states .	53	95.4	17.0	66.1	16.9
Children 12 to 15 years old					
Lived in one state..........	1,967	94.0	26.3	56.0	17.7
Lived in two states.........	448	93.5	24.3	58.7	17.0
Lived in three or more states .	50	94.6	20.7	62.2	17.1
Children 16 and 17 years old					
Lived in one state	1,755	81.9	21.5	65.5	13.0
Lived in two states	393	82.3	20.8	66.7	12.5
Lived in three or more states .	39	83.9	18.7	70.2	11.2

Source: 1970 Census of Population, *Lifetime and Recent Migration*, Table 6.

- decline in the actual level of central city services in some cities;
- housing subsidy programs of unprecedented magnitude which tend to accelerate racial transition in the city, create opportunities for lower income whites in suburbs, and, sometimes, end with the elimination of thousands of units from the central city housing stock;
- major financial incentives, in terms of down payment and financing, for young families to purchase new outlying suburban housing.

In addition, he points out that there are specific problems in schools:

- Many city schools have deteriorating physical plants.
- Local newspapers carry reports of steadily declining achievement tests.
- Teacher strikes have eroded confidence and sometimes produced substantial enrollment declines.
- Financial crisis is forcing rising teacher ratios.

Implicit in much of the literature as Orfield points out, is that what is interpreted to be white flight may more properly be seen as a class, rather than an ethnic, phenomenon. For example, Washington, D.C. in the period following 1972 has undergone an epidemic of "massive Black flight." Orfield argues as follows:[27]

> The situation in the Washington metropolitan area suggests possible future patterns. In the first four years of the 1970's, the Washington Black population fell by 5 percent. The city's suburbs, on the other hand, experienced an astonishing 61 percent increase in Black population in this brief period. The decline in central city Black population during this period was more than

> twice as fast as the out-migration of the city's remaining whites. Almost three-fifths of the total suburban population growth during this period came from new Black residents.
>
> More than a third of the Black children in the Washington metropolitan area attended suburban schools by 1972, and the number is steadily rising. District of Columbia public school statistics show that even among the Blacks who remain in the city, about 10,000 are using private schools. The city, in other words, is experiencing 'massive black flight,' and its public schools are becoming not simply Black institutions, but Black lower class institutions. Elementary school enrollment declined 5.4 percent in the single year between fall 1973 and fall 1974. Obviously these families are not fleeing contacts with Blacks, but are responding to both the problems of city life and the attractions of the suburbs.

The substance of the white flight research is that it is really not clear what causes the partitioning of populations. But it is likely that many of the factors most crucial in that process are outside the scope of school policy, such as problems of housing policy and crime control, and the quality of urban life.

VII. THE DEMOGRAPHY OF DECLINING ENROLLMENT[1]

America experienced a record high level of births for the 18 years from 1946 to 1964. In each of those years, births exceeded any year previous to 1946, usually by at least 25 percent. From 1954 to 1964, numbers of births exceeded 4 million each year. The maximum number born was, however, recorded in 1957. The decline, barely perceptible at first, began to accelerate in the early 1960's. The last year of 4 million plus births was 1964. There was a sharp 7 percent drop in 1965 and the decline in numbers born continued (with the exception of a small upturn in 1969 and 1970) to 1973. Since then, the level has held fairly steady at just under 3.2 million a year. This represents a decline of over 20 percent in just one decade (1964 to 1974).

School enrollments in the elementary schools (K-8) peaked in 1969, high school enrollments (9-12) are expected to peak this year. These trends in the large, imply relative over capitalization or underutilization of schools and surplus teachers. Managing this decline is a major policy concern in education at the state and local level.

Furthermore, decline is too simple a concept. Shifting school populations, local growth and local decline are more appropriate planning concepts. Making matters worse is the inadequacy of demographic analysis capabilities at the state and local level.

Some of the aggregate figures hide the thorniest policy issues; namely, the highly uneven distribution of these shifts at the regional, state, and local level.

A. The Responses to Decline

In the face of declining enrollment, there are only three general strategies available to school administrators.

1. Contract in size:
    - consolidation
    - staff cutbacks
    - cut the so-called frills, i.e., sports, music and art
2. Expand services to present clientele through:
    - after school care
    - personal development
    - curriculum expansion
    - smaller classes and more individualized attention (This could include reducing the size of individual school populations without closing.)
    - health services
3. Expand services to new clientele, such as:
    - preschool day care
    - health services, for example, immunization
    - community center functions
    - adult learning needs

- credentials
- career skills
- hobbies and recreation
- other training of economic value, such as car and home repair

There is much to say in favor of each of these options and many questions to raise about their appropriateness, in general, or in any particular context.

Several of them will be considered in turn in this and the next section which most sharply relate to demographic factors.

Under Congressional mandate, the National Institute of Education has set up a Division of School Finance and Organization specifically to explore the impacts of declining enrollments on financing organizations of elementary and secondary education.

This section presents background data of a demographic sort now available, mostly drawn from that program's activities. It does not deal with questions of finance policy.

A sense of the details and complexity of decline and shifting school populations is seen in the attached Figures 63-64, prepared by the Minnesota State Demographer for the report of the Commission on Minnesota's Future.

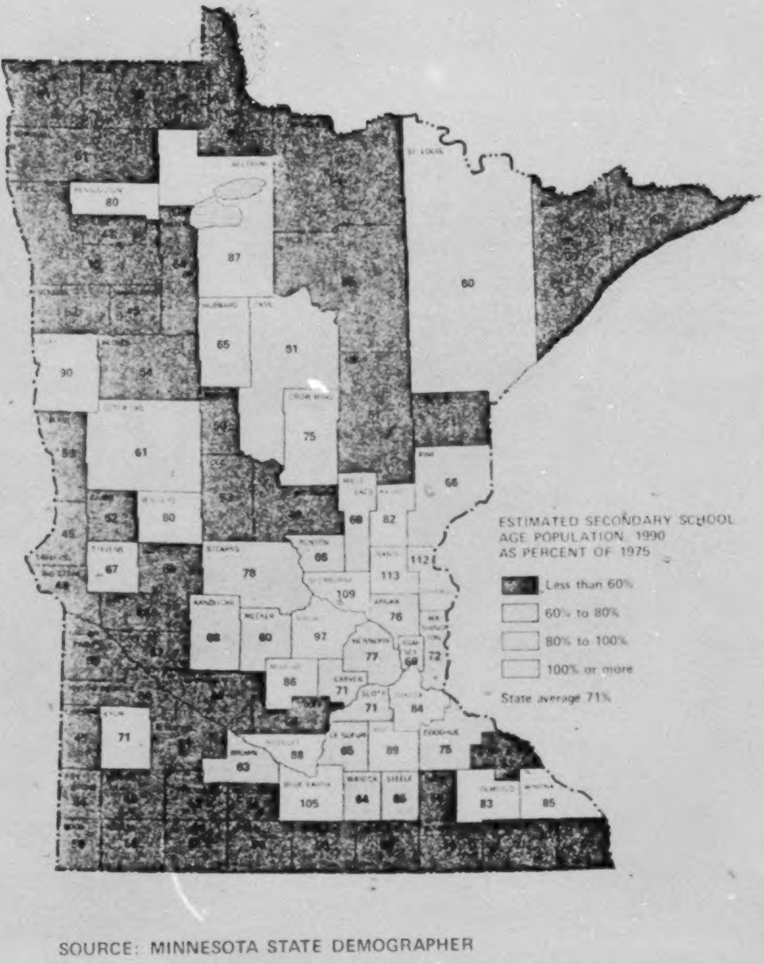
The data indicates that by 1990, the center of the Minneapolis-St. Paul area (SMSA) will have only 60 to 80 percent of the 1975 school population, but that the suburban ring will undergo a mixed pattern--decline to that same level in some counties, with growth in four counties. In the less populated rural areas of Minnesota, the pattern is quite clear, a substantial decline to 60 percent or less of the present school system.

B. Where Declining Enrollment Occurs

Approximately three-fourths of the states (37 states) have experienced enrollment declines since 1970 as indicated by Table 61. California, alone, has lost 239,000 students since 1970 and Ohio has lost 112,000. To obtain an indicator of the impact of the decline, the absolute numbers have been adjusted to a percent of 1970 enrollments. Sixteen states have lost at least four percent of their students, with Kansas losing approximately thirteen percent, and North Dakota, ten percent. Twelve states have experienced increasing enrollment during the past five years (Table 62) with Arizona (+ 9.8) and Florida (+ 8.1) leading the list.

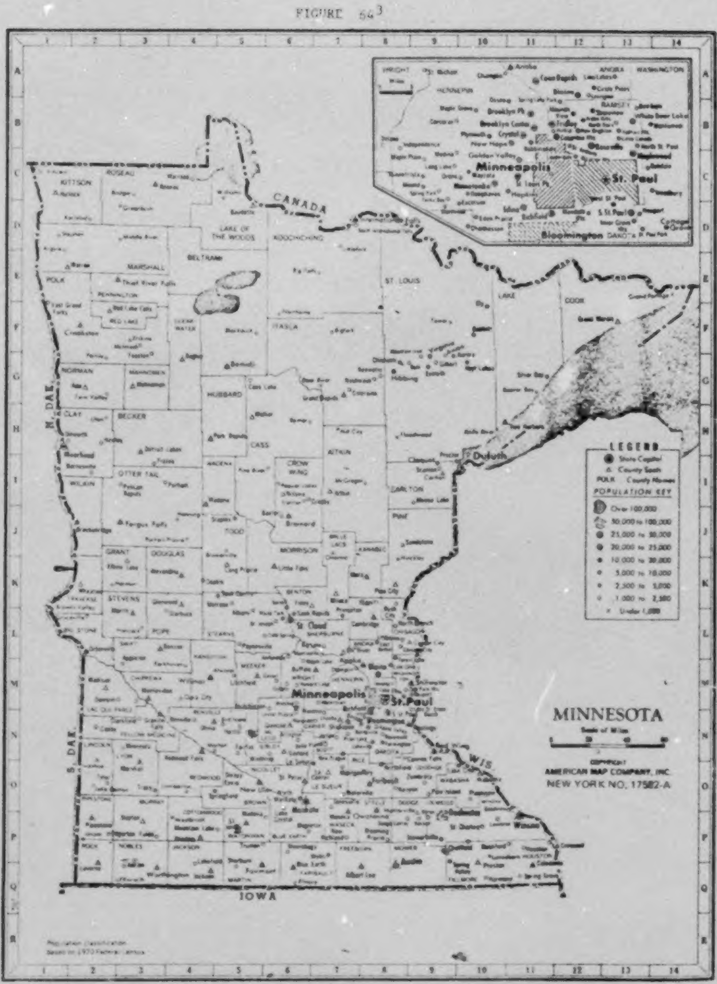
FIGURE 63

SCHOOL AGE POPULATION, 1990 [2]


ESTIMATED SECONDARY SCHOOL AGE POPULATION 1990 AS PERCENT OF 1975
Less than 60%
60% to 80%
80% to 100%
100% or more
State average 71%
ST. LOUIS
PENNINGTON
BELTRAMI
HUBBARD
CASS
CROW WING
OTTER TAIL
STEARNS
STEVENS
KANDIYOHI
MEEKER
HENNEPIN
CARVER
SCOTT
ANOKA
ISANTI
PINE
BENTON
SHERBURNE
LE SUEUR
BLUE EARTH
WASECA
STEELE
GOODHUE
OLMSTED
WINONA
LYON
BROWN
NICOLLET
DODGE
WASHINGTON
RAMSEY
KANABEC
MILLE LACS
80
87
90
65
91
54
75
61
80
66
82
67
78
66
109
113
112
76
68
60
97
77
69
72
86
71
71
84
71
88
66
89
75
63
105
64
85
83
85

SOURCE: MINNESOTA STATE DEMOGRAPHER

FIGURE 64[3]


MINNESOTA
Scale of Miles
0 20 40 60
COPYRIGHT
AMERICAN MAP COMPANY, INC.
NEW YORK NO. 17582-A
LEGEND
State Capital
County Seats
POLK County Names
POPULATION KEY
Over 100,000
50,000 to 100,000
25,000 to 50,000
20,000 to 25,000
10,000 to 20,000
5,000 to 10,000
2,500 to 5,000
1,000 to 2,500
Under 1,000
CANADA
IOWA
N. DAK.
S. DAK.
WIS.
Minneapolis
St. Paul
Duluth
Bloomington
KITTSON
ROSEAU
LAKE OF THE WOODS
KOOCHICHING
MARSHALL
BELTRAMI
POLK
ST. LOUIS
LAKE
COOK
ITASCA
HUBBARD
CASS
CLAY
BECKER
OTTER TAIL
WILKIN
CROW WING
AITKIN
CARLTON
TODD
MORRISON
GRANT
DOUGLAS
STEVENS
POPE
STEARNS
Population Classification
Based on 1970 Federal Census

4583

TABLE 61

Declining Enrollments of State School Systems 1970 to 1975[4]

	In Thousands	% Decline from 1970 Enrollments
Alabama	48	6.0
Arkansas	12	2.7
California	239	5.2
Connecticut	7	1.1
Delaware	4	3.0
Georgia	27	2.5
Hawaii	6	3.3
Illinois	79	3.4
Indiana	55	4.5
Iowa	44	6.6
Kansas	66	12.9
Kentucky	22	3.1
Louisiana	9	1.1
Maryland	29	3.2
Michigan	60	2.8
Minnesota	37	4.0
Mississippi	25	4.7
Missouri	46	4.4
Montana	6	3.4
Nebraska	13	4.0
New Jersey	24	1.6
New Mexico	1	.4
New York	66	1.9
North Carolina	23	1.9
North Dakota	15	10.2
Ohio	112	4.6
Oklahoma	36	5.7
Oregon	7	1.5
Pennsylvania	97	4.1
Rhode Island	11	5.9
South Carolina	16	2.5
South Dakota	13	7.8
Tennessee	35	3.9
Texas	78	2.7
Washington	39	4.7
Wisconsin	26	2.6
Wyoming	2	2.3

TABLE 62

Increasing Enrollments of State School Systems
1970 to 1975[5]

	In Thousands	% Increase Since 1970
Alaska	6	7.5
Arizona	43	9.8
Colorado	13	2.4
Florida	116	8.1
Idaho	4	2.2
Maine	3	1.2
Massachusetts	32	2.7
Nevada	8	6.3
New Hampshire	12	7.5
Vermont	1	1.0
Virginia	5	.5
W. Virginia	1	.3

The problem of decline is most severe in states, such as New York and California, where severe fiscal constraints on state budgets may limit local resources and state aid. In other areas the property tax base is growing.

Declining enrollment may also ease constraints as suggested below in the case of Iowa by becoming the basis for substantial financial reform.

Just as enrollment shifts vary by state and geographic region, they also vary by grade level, district and type of community. Table 63 illustrates that the overall impact of declining enrollment has been most severe in the early grades while enrollment increases are still taking place in secondary grades. This phenomenon indicates that during the next decade high schools will have to adjust to decreasing numbers of students.

The distribution of enrollment changes is also far from uniform among school districts within the states, as Table 64 indicates for Michigan, Missouri, South Dakota, and Washington. Many school districts in these states have experienced student declines in excess of 20 percent, while an even greater number have experienced increases of 20 percent or more.

The amount of decline also varies with school district size and geographic location. Results of studies conducted by the Education Commission of the States (ECS) and the National Council of State Legislatures (NCSL) indicate that declining enrollments have occurred in school districts of all sizes, but have affected most severely the largest and most of the smallest districts.

TABLE 63

Percent Change in Public Elementary and Secondary School Enrollment Between Fall 1970 and Fall 1974[6]

Region and State	Percent Change in: Elementary Enrollment	Secondary Enrollment	Total Enrollment
New England	-3.7%	9.5%	1.1%
Connecticut	-4.2	10.8	-0.2
Maine	-2.1	5.8	0.1
Massachusetts	-5.9	14.5	2.6
New Hampshire	8.5	11.2	9.6
Rhode Island		-9.5	-4.8
Vermont	-3.2	-11.1	-6.5
Mideast	-7.7	4.7	-2.4
Delaware	-8.7	7.2	-1.6
Maryland	-9.1	7.4	-2.1
New Jersey	-3.8	4.2	-1.0
New York	-7.8	5.5	-1.8
Pennsylvania	-9.1	2.6	-3.7
Southeast	-0.7	4.9	1.5
Alabama	-8.0	-1.4	-4.9
Arkansas	0.8	5.6	3.0
Florida	14.5	22.8	18.2
Georgia	-4.6	3.7	-1.6
Kentucky	-3.8	1.7	-1.8
Louisiana	-0.1	0.1	0.0
Mississippi	-1.7	-6.6	-3.9
N. Carolina	-2.1	0.8	-1.2
S. Carolina	-1.9	-1.9	-1.9
Tennessee	-8.3	0.1	-3.0
Virginia	-0.8	5.0	1.4
W. Virginia	3.1	-1.1	1.2
Great Lakes	-11.5	10.9	-2.9
Illinois	-7.3	5.7	-2.6
Indiana	-9.3	3.4	-3.7
Michigan	-9.6	7.3	-1.9
Ohio	-19.2	32.3	-4.2
Wisconsin	-5.7	3.4	-2.0
Plains	-16.9	10.1	-7.2
Iowa	-29.5	49.2	-6.4
Kansas	-17.9	-5.6	-12.7
Minnesota	-10.6	4.7	-3.4
Missouri	-16.0	11.0	-9.1
Nebraska	-9.8	3.9	-3.9
N. Dakota	-14.6	2.0	-9.4
S. Dakota	-10.8	-0.6	-7.6

Continued)

Southwest	-16.7	42.9	1.9
Arizona	14.8	3.4	11.3
New Mexico	-11.8	0.9	-6.0
Oklahoma	-8.4	0.6	-4.5
Texas	-23.4	73.3	2.7
Rocky Mountains	-0.5	4.5	1.7
Colorado	-0.9	8.5	3.3
Idaho	-0.9	6.8	2.9
Montana	7.3	-15.5	-1.6
Utah	-2.8	5.1	0.8
Wyoming	-7.0	7.4	-0.4
Far West	-8.4	1.2	-4.7
Alaska	-18.6	85.6	7.1
California	-9.0	-0.6	-5.8
Hawaii	-7.4	5.5	-1.8
Nevada	-1.1	19.2	7.4
Oregon	-0.8	-0.3	-0.6
Washington	-9.5	2.6	-3.9
Total U.S.	-8.5	8.9	-1.7

TABLE 64

DISTRIBUTION OF PERCENT CHANGE IN STUDENTS
BETWEEN 1970-71 AND 1974-75 IN
MICHIGAN, MISSOURI, SOUTH DAKOTA AND WASHINGTON[7]

Percent Change in Students 1970-71 to 1974-75	Number of School Districts			
	Michigan	Missouri	South Dakota	Washington
Over -25 percent	12	5	7	9
-20 to -25 percent	9	4	10	9
-15 to -20 percent	18	21	24	15
-10 to -15 percent	48	42	40	24
-5 to -10 percent	63	85	52	48
0 to -5 percent	97	60	26	43
0 to 5 percent	84	97	16	46
5 to 10 percent	95	48	7	35
10 to 15 percent	59	42	3	15
15 to 20 percent	29	24	2	17
20 to 25 percent	25	10	3	13
Over 25 percent	44	7		23

Source: Based on data from the State Departments of Education in Michigan, Missouri, South Dakota and Washington.

TABLE 65

AVERAGE PERCENT CHANGE IN STUDENTS BETWEEN 1970-71 AND 1974-75 AMONG MICHIGAN, MISSOURI, SOUTH DAKOTA AND WASHINGTON SCHOOL DISTRICTS BY CENTRAL CITY, SUBURB AND NONMETROPOLITAN LOCATIONS[8]

State	Location of District	Number of Districts	Percent Change in Students, 1970-71 to 1974-75			
			Average	Minimum	Maximum	Standard Deviation
Michigan	Central City	11	-5.3	-12.3	11.4	7.6
	Suburban	225	+2.9	-30.8	148.2	18.1
	Nonmetropolitan	347	+5.7	-48.5	162.5	18.6
Missouri	Central City	5	-10.1	-21.1	2.7	9.5
	Suburban	85	+ 5.0	-22.1	61.9	16.9
	Nonmetropolitan	365	- 1.1	-34.4	116.5	12.8
South Dakota	Central City	2	-8.3	-5.8	-10.9	3.6
	Suburban	10	-1.0	-18.5	12.0	9.9
	Nonmetropolitan	180	-6.7	-37.5	235.4	21.7
Washington	Central City	4	-12.5	-18.5	-8.0	4.5
	Suburban	65	+ 4.6	-19.1	65.0	15.3
	Nonmetropolitan	228	- 1.5	-85.9	204.6	25.9

Source: Based on data from the State Departments of Education in Michigan, Missouri, South Dakota and Washington.

What is occurring becomes clear as one examines the enrollment changes in urban, suburban and nonmetropolitan school districts. In most states, as in the four states ECS studied, the smallest school districts are located predominately in nonmetropolitan areas while the largest school districts are in metopolitan locations. Table 65 shows that the school districts with the maximum enrollment declines and the school districts with the maximum increases in students are both located in nonmetropolitan areas. The data in the table also clearly illustrate the effect of pupil decreases on central city school districts. There was pupil decline in the central cities in each of the four states.

Closely related but by no means identical data, collected in the study by the National Association of State Boards of Education at the Syracuse Research Corporation, present change in the fifty states for enrollments in grades K through 8 and K through 12. The projected changes from the fall of 1975 to the fall of 1980 were collected directly from state education agencies through a survey for the U.S. Office of Education (Table 66).

With regard to Big City Schools, the National Association of State Boards of Education concluded: [9]

> Severe enrollment decline is primarily an urban problem. When state education departments were asked where they expected the greatest declines to occur in the next five years, officials in 17 of the 37 states responding indicated that the most severe decline would be in the state's largest

TABLE 66

Percentage Change In Enrollments in the Fifty States Ranked By Per Cent K-8 Decline[10]

(All percentages are negative unless otherwise noted.)

	% Change in Enrollments Between Fall 1971 and Fall 1975		*Projected Change Fall 1975 to Fall 1980*
State	*K-8*	*K-12*	*K-12*
More than 10%			
Kansas	15.40%	11.40%	1.64%
North Dakota	13.89	8.59	NR*
South Dakota	10.73	7.42	4.80
Rhode Island	10.51	7.18	4.56
8-10%			
Iowa	9.63	5.66	14.50
Delaware	9.18	4.45	15.88
Illinois	9.08	4.27	10.52
Alabama	8.87	6.11	NR
Nebraska	8.52	4.92	5.14
Pennsylvania	8.49	4.62	15.25
Ohio	8.15	5.11	10.95
Minnesota	8.04	3.27	13.04
6-8%			
Hawaii	7.90	4.71	3.50
Indiana	7.82	4.37	6.77
Missouri	7.71	2.87	NA**
Maryland	7.69	3.80	6.80
Oklahoma	7.68	5.55	NA
New Mexico	7.64	1.73	6.16
Montana	7.40	4.19	5.16
Mississippi	7.20	3.84	NA
New York	7.06	3.07	11.86
Wisconsin	6.68	3.19	5.03
Connecticut	6.58	1.77	NR
Louisiana	6.31	2.47	NA
Kentucky	6.27	3.51	+1.01
California	6.23	4.51	8.17
4-6%			
Washington	5.90	3.23	NA
Michigan	5.30	4.15	NA
New Jersey	5.17	2.65	11.66
Tennessee	5.05	3.63	NR
South Carolina	4.66	4.10	2.39
Vermont	4.46	1.27	NA
Arkansas	4.29	2.22	7.96
2-4%			
Colorado	3.70	2.66	5.84
Maine	3.69	+ .64	NA
Virginia	2.85	+ .92	6.33
Wyoming	2.79	1.65	NA
Alaska	2.72	+1.91	+3.38

TABLE 66 (Cont'd)

State	*% Change in Enrollment Between Fall 1971 and Fall 1975* *K-8*	*K-12*	*Projected Change Fall 1975 to Fall 1980* *K-12*
(2-4%, continued)			
Utah	2.63	.57	6.28
Texas	2.56	1.76	NR
West Virginia	2.06	.58	7.57
0-2%			
Oregon	1.94	1.14	3.49
Massachusetts	1.92	+ .74	7.36
North Carolina	1.88	.62	3.74
Georgia	1.88	1.97	NA
Idaho	1.78	.47	NA
Nevada	.04	+4.46	NA
+			
New Hampshire	+1.17	+4.26	NA
Florida	+2.57	+4.42	+2.78
Arizona	+2.99	+3.98	+7.42

*NR = Survey not returned.
**NA = Data not available.

> city would rank second among areas experiencing severe declines. Nineteen states ranked second order cities among areas most likely to experience decline.
>
> Large cities are viewed as areas of highest decline whether or not the state is itself experiencing large, moderate or small declines. The ranking of large and second order cities as those likely to experience the highest decline was also evident in some rural states (Arkansas, Kansas, South Dakota and Vermont). In five of the eight states not ranking cities as the principal candidates for decline, rural areas and small towns were ranked one and two.
>
> Our analysis of existing data showed that only 12 of 85 city districts in the nation's largest cities had enrollment increases between 1970 and 1974--three in Florida and two each in Texas and California. Despite these few increases--most of which occurred in the "sunbelt" states--principal cities in the South and West, like other cities around the country, primarily experienced enrollment declines.
>
> Texas presents a good example of that situation. Although Austin and El Paso show increases of 6.3 and 0.7 percent respectively, Corpus Christi, Dallas, Fort Worth, Houston and San Antonio's principal city districts all experienced marked declines. Out-migration from the city districts of non-minority pupils and absolute increases of minority group pupils within large city districts have produced substantial changes in the enrollment mix in Texas cities. For example, in Dallas and Fort Worth, increasing Black and Spanish-surname enrollments occurred simultaneously with decreases in non-minority enrollment. Substantial declines in non-minority enrollments are responsible for the overall district declines in Corpus Christi and San Antonio. Similar changes can be observed in the mix of enrollment characteristics in many of the 85 largest cities. The changing composition of city school district enrollments has profound effects on the educational and fiscal needs of such districts."

In sum, the national decline in enrollments does not imply universal distress. Declining enrollments are not a uniform phenomenon. They are occurring predominately in Northeast, Mid-Western, Mid-Atlantic and

Pacific coastal states while the South and Southwest enjoy a boom. To complicate matters further, both enrollment declines and increases occur in the same state with very small districts experiencing both shrinking and growing student populations. Especially hard hit will be big cities already in great fiscal distress.

C. Big City School Systems

Big city school systems are faced with special problems in this period of decline in enrollment. The 27 largest cities in the country peaked in their total school enrollment in 1970-71 at 5.4 million. In 1975-76, enrollment declined to the level of 1962-63 (Figure 65 and Table 67).

Of equal if not greater significance than the drop in enrollment is the pattern of minority group students in those big city school systems. In the period of 1968 to 1974, those 27 school systems increased an average of 9.5 percent in minority student enrollment. As of 1974, the average student minority enrollment was 67.1 percent (Table 68).

The rate of minority participation of the big city school systems is greater than the percent of minority populations in these cities (Table 69).

The minority student enrollment itself undoubtedly correlates with the relative degree of impoverishment of minority families. Table 70 shows that in 1970 the percent of families at or above the poverty level

FIGURE 65

ENROLLMENTS IN THE TWENTY-SEVEN GREAT CITIES [11]

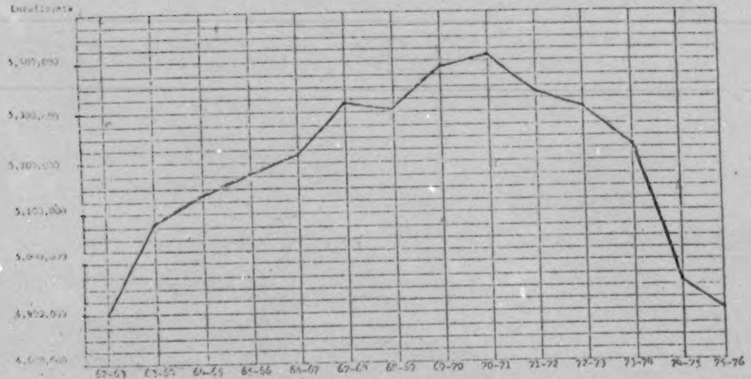


TABLE 67

STUDENT POPULATION CHANGES [12]

	1968	1969	1970	1971	1972	1973	1974	1975	Net Loss	% De-crease
Atlanta	111,227	109,664	105,598	100,316	96,006	88,125	85,298	84,300	26,927	24.2%
Baltimore	192,171	193,123	192,458	190,735	186,507	182,733	182,733	171,451	21,672	11.2%
Boston	94,174	94,887	96,696	96,583	96,239	93,647	87,169	76,005	18,882	19.9%
Buffalo	72,115	71,441	70,305	68,217	64,296	60,752	58,950	56,879	13,165	18.3%
Chicago	582,274	582,071	577,679	574,495	553,342	539,365	530,188	530,000	52,274	9.0%
Cleveland	156,054	150,718	153,619	148,854	145,196	137,569	132,029	127,123	28,931	18.5%
Dade County (Miami)	232,465	244,016	24[illegible],447	244,765	241,809	244,395	246,548	244,439	2,109	
Dallas	159,924	162,490	164,736	157,799	154,581	153,549	149,510	142,034	27,702	13.7%
Denver	96,577	96,534	97,928	94,808	91,616	87,620	79,670	76,503	21,425	21.8%
Detroit	296,097	238,383	284,396	282,076	276,655	263,958	257,396	246,981	49,116	16.6%
Long Beach	72,065	70,472	69,927	69,205	63,838	62,413	62,339	59,271		
Los Angeles	653,549	654,654	642,895	633,951	620,659	611,228	598,314	609,645	45,009	6.8%
Memphis	125,813 *	134,190	148,304	145,903	138,714	119,542	120,186	118,267	30,037	20.3%
Milwaukee	130,445	132,462	132,349	131,815	127,986	123,224	118,474	115,700	16,762	12.6%
Minneapolis	70,006	68,278	66,938	65,201	61,565	58,833	56,161	53,271		
Nashville	93,720	95,821	95,313	88,190	85,406	83,521	80,118	80,231	15,590	16.2%
New Orleans	110,783	110,664	109,856	108,969	103,839	98,828	93,927	95,729	15,054	13.6%
New York City	1,063,787	1,115,870	1,140,359	1,131,058	1,125,449	1,104,920	1,103,406	1,1[illegible]905	37,454	3.2%
Oakland	64,102	61,679	67,830	67,323	65,189	60,703	61,559	54,768		
*Philadlephia	282,617	283,209	279,829	273,458	282,965	267,902	266,500	262,500	20,709	7.3%
Pittsburgh	76,268	73,500	73,481	71,502	70,080	68,414	66,106	63,629		
Portland	78,413	77,806	76,206	72,694	68,632	66,325	63,514	62,002		
St. Louis	115,582	113,374	111,233	107,986	105,617	98,850	93,320	86,999	28,583	24.7%
San Diego	128,914	129,531	128,783	128,327	124,487	123,466	123,114	122,000	7,531	5.8%
San Francisco	94,154	93,139	91,150	83,584	81,970	78,010	67,719	70,777	23,377	24.5%
Toledo	61,684	62,965	61,699	62,597	61,694	59,911	59,049			
Washington	148,725	148,931	145,330	141,806	140,000	136,036	130,807	130,685	18,246	12.2%

*From Year of Largest Enrollment to Year of Latest Available Figures, [illegible], 1975

Source: Office of Civil Rights: 1975 Data - Educational Research System Bulletin, February, 1976

Compiled by: Council of the Great City Schools
Washington, D.C.
January, 1976

TABLE 68

MINORITY PERCENTAGE OF TOTAL ENROLLMENT IN GREAT CITY SCHOOL SYSTEMS[13]

	1968	1970	1972	1974	Increase in Percentage 1968-1974
Atlanta	61.8	68.7	77.4	84.9	23.1
Baltimore	65.1	67.1	69.3	70.4	5.3
Boston	31.5	35.9	40.5	47.7	16.2
Buffalo	39.1	41.7	45.1	47.7	8.6
Chicago	62.3	65.4	69.0	72.5	10.2
Cleveland	57.5	59.7	59.9	60.6	3.1
Dade County	41.7	46.2	51.6	54.0	12.3
Dallas	38.8	42.7	49.4	55.5	16.7
Denver	34.4	38.3	41.7	45.6	11.2
Detroit	60.7	65.5	69.5	73.6	12.9
Long Beach	14.7	16.8	NA	26.2	11.5
Los Angeles	46.3	49.6	52.7	58.0	11.7
Memphis	53.7	51.6	58.0	69.9	16.2
Milwaukee	27.0	29.7	33.9	38.4	11.4
Minneapolis	10.7	13.0	15.9	19.1	8.4
Nashville	24.2	24.9	28.1	NA	3.9
New Orleans	68.7	71.4	76.2	80.8	12.1
New York City	56.1	61.7	64.4	65.6	9.5
Oakland	69.1	71.7	75.0	78.2	9.1
Philadelphia	61.3	63.6	64.8	66.8	5.5
Pittsburgh	39.7	40.6	42.3	43.4	3.7
Portland	10.5	12.0	14.0	15.6	5.1
St. Louis	63.8	65.9	69.1	70.4	6.6
San Diego	23.9	24.6	26.3	30.3	6.4
San Francisco	58.8	63.1	68.2	69.2	10.4
Toledo	29.2	29.5	30.5	33.6	4.4
Washington	94.4	95.5	96.5	96.7	2.3
Average	46.1	48.8	53.4	67.1	9.5

TABLE 69

MINORITY POPULATIONS IN THE BIG CITIES AND BIG CITY SCHOOL SYSTEMS[14]

	% Minority Pop. in Total City Population-1970	% Minority Student Enrollment - Fall 1974	City Minority Pop. as a % of State Minority Population-1970	City Minority Student Enrollment as a % of State Minority Student Enrollment - Fall 1972	% Minority Pop. in Total Suburban (SMSA-City) Pop.-1970
Atlanta	51.89	84.9	21.32	21.15	6.66
Baltimore	47.02	70.4	58.55	53.49	6.47
Boston	17.41	47.7	55.01	49.55	1.63
Buffalo	21.26	47.7	4.10	3.17	2.25
Chicago	34.47	72.5	76.60	74.41	4.07
Cleveland	38.99	60.6	29.14	27.74	3.78
Dade County	23.42	54.0	7.33	29.22	12.61
Dallas	25.84	55.5	14.74	8.18	5.30
Denver	10.98	45.6	59.52	39.43	1.46
Detroit	44.50	73.6	64.57	56.45	4.00
Long Beach	8.24	26.2	1.35	1.03	14.91
Los Angeles	22.81	58.0	29.31	26.04	9.07
Memphis	39.16	69.9	38.79	42.45	32.18
Milwaukee	15.57	38.4	70.37	70.93	.57
Minneapolis	6.44	19.1	40.60	38.20	1.58
Nashville	19.91	28.1	14.17	12.67	9.07
New Orleans	45.51	80.8	24.55	22.73	12.82
New York City	23.38	65.6	76.83	79.27	6.43
Oakland	40.94	78.2	6.75	3.91	14.07
Philadelphia	34.37	66.8	63.43	63.59	7.07
Pittsburgh	20.73	43.4	10.21	10.26	6.22
Portland	7.85	15.6	50.56	48.39	1.32
St. Louis	41.34	70.4	51.55	48.42	7.30
San Diego	11.09	30.3	3.52	2.61	4.35
San Francisco	28.57	69.2	9.33	4.45	13.79
Toledo	14.25	33.6	5.45	6.03	1.66
Washington, D.C.	72.33	96.7	-----	100.00	8.97

TABLE 70

URBAN FAMILIES AND STUDENTS BELOW THE POVERTY LEVEL[15]

	% Families Below Poverty Level - 1970		% Students Below Poverty Level - 1975
	City	Suburbs	City
Atlanta	15.9	9.1	30.0
Baltimore	14.0	8.5	31.2
Boston	11.7	6.1	45.7
Buffalo	11.2	6.8	53.2
Chicago	10.6	6.8	40.5
Cleveland	13.5	6.9	34.5
Dade County	16.4	10.9	19.0
Dallas	10.1	8.6	36.3
Denver	9.4	6.8	26.1
Detroit	11.3	6.5	37.1
Long Beach	8.2	8.2	18.0
Los Angeles	9.9	8.2	24.8
Memphis	15.7	16.8	41.2
Milwaukee	8.1	5.7	28.0
Minneapolis	7.2	4.6	26.1
Nashville	10.3	11.2	20.7
New Orleans	21.6	16.4	56.7
New York City	11.5	9.3	45.8
Oakland	12.2	7.2	36.9
Philadelphia	11.2	7.3	43.1
Pittsburgh	11.2	7.2	37.8
Portland	8.1	6.9	21.2
St. Louis	14.4	8.1	42.6
San Diego	9.3	8.6	16.4
San Francisco	9.9	7.2	35.7
Toledo	7.7	6.6	19.1
Washington, D.C.	12.7	6.1	33.7
	11.60	8.24	33.38

Compiled by: Council of the Great City Schools
Washington, D.C.
January, 1976

in the city and surrounding suburbs of these 27 largest cities. The percent of students from impoverished families in these cities is far in excess of the percent of families in poverty, 33.4% vs. 11.6%.

D. Effects on Teachers

The NIE studies to date from early indications in regions already experiencing decline lead to the following conclusions:[16]

- Teacher requirements may decline more rapidly than the supply of new teachers, exacerbating the problem of surplus.
- Declining enrollment is expected to reduce the demand for teachers and although projections show a decrease in the supply of new teachers, the oversupply should persist for some time. The NCES projections are shown in Table 71.
- Older, more experienced teachers will be retained raising costs and levels of experience. While this might appear to increase the quality of education, there are many associated problems.
- Members of minorities will be the first to go during reduction of the work force.
- Comprehensive collective bargaining agreements may lead teachers to bargain for even more policy issues, such as smaller class size.

Declining enrollments may increase average instructional costs since the teachers retained will be at higher pay levels. Instructional costs comprise over half of the current expenditures. A ten percent increase in teaching costs would raise per pupil costs five percent.

TABLE 71

Estimated demand for classroom teachers in regular public elementary and secondary day schools: United States, fall 1969 to 1984 17

[In thousands]

Year (fall)	Total teacher demand	Demand for additional certificated teachers[2]			
		Total	For enrollment changes	For pupil-teacher ratio changes	For teacher turnover
(1)	(2)	(3)	(4)	(5)	(6)
1969	2,013	...	...	...	...
1970	2,055	202	15	26	161
1971	2,063	172	9	-1	164
1972	2,103	205	-12	52	165
1973	2,138	203	-7	42	168
1974	2,159	192	-19	40	171
1970–74	...	974	-14	159	829
		PROJECTED[3]			
1975	2,168	182	-11	20	173
1976	2,179	184	-16	27	173
1977	2,169	164	-30	20	174
1978	2,155	160	-40	26	174
1979	2,130	147	-46	21	172
1975–79	...	837	-143	114	866
1980	2,105	145	-41	16	170
1981	2,095	158	-31	21	168
1982	2,091	164	-20	16	168
1983	2,104	180	-4	17	167
1984	2,134	198	13	17	168
1980–84	...	845	-83	87	841

[1] Includes full-time and the full-time equivalent of part-time classroom teachers (in 1974, 99 percent of teachers in the public schools were full-time). The 1969 data include some part-time teachers who were not converted to full-time equivalents. Does not include teachers in independent nurseries and kindergartens, residential schools for exceptional children, subcollegiate departments of institutions of higher education, Federal schools for Indians, federally operated schools on Federal installations, and other schools not in the regular school system.

[2] The estimates and projections of demand for additional certificated teachers were based on the following assumptions: (1) For changes in pupil-teacher ratios, the number of additional teachers needed is the total teacher demand in a given year less the estimated total teacher demand in the same year had the pupil-teacher ratio in the previous year remained constant. (2) For enrollment changes, the number of additional teachers needed is the total needed for both enrollment changes and pupil-teacher ratio changes less the number needed for pupil-teacher ratio changes alone; the number of additional teachers needed for both enrollment changes and pupil-teacher ratio changes is the total teacher demand in a given year less the total teacher demand in the previous years. (3) For teacher turnover, the number of additional teachers needed to replace those leaving the profession either temporarily or permanently will be 8 percent of the total employed in the previous year; the 8-percent separation rate is based on the Office of Education study *Teacher Turnover in Public Schools, Fall 1968 to Fall 1969.*

The projected demand makes no allowance for replacement of teachers who hold substandard certificates (less than 2 percent of employed teachers in 1972).

[3] The projection of classroom teachers in public schools by organizational level and institutional control is based on the assumption that the pupil-teacher ratio will follow the 1964–74 trend to 1984.

For further methodological details, see appendix A, table A-3.

Declining enrollment could adversely affect minorities and women.

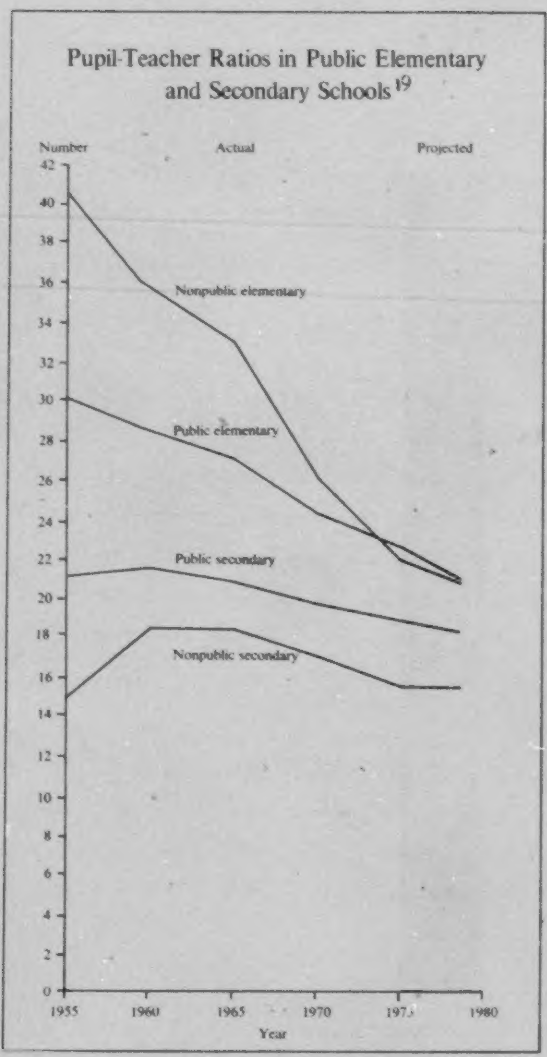
- The psychology of rewards have been closely tied to advancement and promotion. Decline could be accompanied by loss of motivation, frustration and morale problems.
- Minority teachers could be the most severely affected and could lose many of their recent gains. In 1975, minorities comprised 14.5% of pre-school and kindergarten teachers, 10.6% of elementary school teachers and 7.8% of secondary school teachers.
- They were even more heavily represented among teacher aides (33.5%) and among service workers (25.3%).
- Declining enrollment may accelerate unionization and militancy with a demand to play a bigger role in policy formulation. This is, in fact, already happening. AFT membership has grown from 100,000 to 440,000 in 1974. In 1966, 26% of all agreements were comprehensive (included policy input); by 1970, 43% of all agreement were comprehensive. One example of a bargaining point is class size. In 1966-67, there were 222 agreements including provisions for teacher input on the determination of class size; in 1970-71, there were over 800.

E. Possible Teacher Shortage in the Mid-1980's

A study by Peter Morrison points to the possibility of a teacher shortage sometime in the 1990's.[18] The factors behind this possiblity are:

- The poor job market, which could discourage students from entering teacher training,

FIGURE 66



Pupil-Teacher Ratios in Public Elementary and Secondary Schools[19]

- The age structure of the current stock of teachers and especially of the reserve pool of teachers, which consists of former teachers who have left the field to raise families and whose children are either grown or considered old enough to leave. By the late 1980's a large number of these persons, products of "the initial large cohorts of teachers produced in the mid 1950's will be reaching advanced ages."
- A projected annual increase of 2 to 3 percent a year in school enrollments, due to begin in 1985.

The projected teacher's shortage need not be a matter of urgent or pressing concern now, it may be dealt with flexibly should the time of shortage approach. Should the upsurge in school enrollments begin in the mid-80's it will already be visible some five years earlier from both national and local birth records, and other statistical data. As far as the stock of teachers goes, there will still be potentially substantial flexibility in the system at that time.

Impending demographic trends, in conjunction with recent gyrations in the market for teachers and the teachers-production system, could reverse today's teacher surplus quite suddenly. A shortage of teachers sometime in the mid-80's is a possiblity for complex reasons analogous to the well-known corn hog cycle in farming.

The adoption of some form of the California system in which persons with B.A's can be certified after one additional year of training would give added job flexibility to those potentially entering education and would not require a commitment four years before job openings, but only a commitment for a year or so. Furthermore, some of the vast reservoir of retired teachers or people who have gone into teacher training and never utilized it may be available for credentializing. The anticipated teacher shortage of whatever scope, therefore, does not seem to present a significant problem now or in the future. These observations are not intended in anyway to undercut the potential concerns of schools of higher education, over their role in teacher production, nor are they intended to overlook the potential response of organized teachers urging alternative public strategies.

In the same way that the upturn of teachers is manageable, the need for new facilities does not seem to present any large scale nationwide problem. It probably can be dealt with in terms of better local planning.

F. Impacts of Decline on District Management

The NIE conducted studies through the National Conference of State Legislatures on how the state of Iowa managed its school decline. Iowa is a state that has suffered the nation's most severe enrollment decline in the early 1970's. The authors of that study conclude:[20]

- capital costs, debt service and building maintenance are largely fixed and fixed costs must be amortized over fewer students;
- average teacher salaries are pushed toward the upper end of the salary schedule as attrition is reduced and there are fewer openings for new teachers;
- community residents staunchly resist neighborhood school closings, potential fiscal economy; and
- because many state formulas are based on per capita outlays, enrollment declines mean reduced state funding.

In general, the limited number of case studies of decline do suggest the following as stated in the NIE study:[21]

- "First, many of the supposed woes resulting from declining enrollment are likely to be the product of other trends.
- "Second, that declining enrollment can result in the erosion of service quality, but not nearly to the degree that some believe.
- "Third, that public officials who want to compensate for the disruptions of declining enrollment would be well advised to demand proof that declining enrollment is causing the specific hardship that some allege."

Although decline has had mixed effects, the authors contend it has failed to provide any major shifts in the quality and character of local school services. Whereas districts claim that decline inhibits innovation and expansion, they also report their adjustments to it have yet to result in programmatic cutbacks. Rather, what does seem to be occurring is a renewed interest in reorganization of local attendance areas and grade divisions as well as in school district consolidation.

The authors also found that declining enrollments in Iowa was the impetus behind the state's revision of its school finance formula. The state used the reduced per pupil demand on state resources to selectively redirect funds to poorer districts. Within the state, however, "...the prospect of declining enrollment was also used as an argument for greater state assumption of local school operating costs... Declining enrollment would permit the state to pay for an increasing share ... of education expenditures with little or no increases in the absolute number of dollars." Using the lever of declining enrollment, by 1975 "...only two other states--Florida and New Mexico--could claim less variation in their local per pupil operating expenditures." 22

G. Uses of Demographic Data in State Education Planning

The Minnesota State Planning Agency's relationship to education has been described by Professor Van D. Mueller of the University of Minnesota as taking numerous actions "...to bring educational policy making and planning and state policy making and planning closer together."[23] Among the activities he describes are:

> Initiatives were taken with the State Department of Education to disseminate enrollment data generated by the State Planning Agency;
>
> The Planning Assistance Manual for Managing School Districts with Declining Enrollments and accompanying case studies were developed by SPA to assist and stimulate local districts in planning, and to provide the SDE with additional tools for providing technical assistance to local schools;
>
> SPA assisted in the planning and development and supported legislative actions that resulted in the enactment of two new management systems: (a) Uniform Financial Accounting and Reporting Systems (UFARS) and (b) Planning, Evaluating and Reporting System (PERS). These actions could be viewed as attempts at trend modification;
>
> Analyses were initiated by SPA in education and human services to understand fundamental age structure changes and their impact on school enrollments;
>
> Analyses were begun of educational services in rural Minnesota including the exploration of alternative structures for delivering educational programs and services. In this area SPA developed a policy paper and supported the establishment of the Educational Cooperative Service Units (ECSU's);
>
> SPA initiated analyses to examine the interactions between employment, tax revenues, changing human service demands, costs to the state, and possible reallocations over time. It was assumed that the need for reallocations between human services several years from now might require statutory changes now and also might require efforts now to establish expectations that reallocations will really happen;
>
> Exploratory studies in enrollment trends continue under the auspices of the state demographer. A detailed study of population migration and its impact at the school district level has just been completed; and

> A day and a half seminar on the fiscal implications of enrollment decline sponsored by SPA for the full membership of legislative education committees and research staff.

He points out that these actions:

> ...represented attempts to include education in the state's total policy and planning scheme by relating the planning for education with the planning in education and thereby increasing the political viability of educational planning at the state and local levels.

California

The State of California system has a Population Research Unit which is set up mainly to aid state agencies.[24] It is located within the Department of Finance, estimates and projects California population by various levels of detail. It analyzes the implications of its findings upon request. Most requests handled come from other State agencies, particularly other units and divisions within the Department of Finance. The Unit's regular output includes an annual estimate of total population by approximately 500 cities and counties as well as projections, done every 2 to 3 years, of population by county and age. A range of projections are done using several fertility and migration assumptions. The basic data for these projections comes from the Federal census, supplemented by special county censuses. These are supervised by the Population Research Unit or a cooperative basis with local governments. The Unit also assists localities other than counties to do special censuses when requested. Since 1970 it has provided technical assistance, including final tabulations, for such censuses for twenty school districts which requested special financial assistance from the State Allocation Board because of sudden population increases.

In addition to straight population work, the Unit projects education statistics using the grade progression method and age participation rates. Enrollment at the K-12 level is done for the State as a whole; numbers of high school graduates are done by county. Work is currently underway to develop projections for community college districts. Recent state legislation requires an annual estimate of the adult population (18 and over) for community college districts. The projection of high school graduates by county is a major input in the enrollment planning of the three segments of public post-secondary education in the state.

The projection of K-12 enrollments for the State as a whole is of considerable use in planning the State budget for elementary and secondary education, but the county population projections by age are of greater potential use to local school districts. Of course, counties generally contain more than one school district and they could well be (and usually are) growing or declining differentially. Nevertheless, reliable information about the population prospects for the immediate area is a more useful base from which to begin estimating a district's likely change than statewide or national figures.

More importantly, the techniques used by the Population Research Unit to project county changes could be approximated for district changes, albeit with greater uncertainty of accuracy. If the use of such techniques were tempered with a sound knowledge of the locality, school districts could get a fairly good base for planning. It should be noted here that the Unit suggests that counties include school district boundaries on their maps when special county censuses are taken. If they do, the census data, including age, grade, and housing data, is available for the districts separately, i.e., is identifiable in the computer printout. This would be an excellent base for projecting enrollments, but many counties do not understand this or find it too troublesome and do not bother.

Unfortunately, neither the projections nor the technical assistance of the Population Research Unit have been as well utilized as they might have been by local districts, many of which seem unaware of their availability or are perhaps unsure about how to utilize such help. The Population Research Unit does not at present have the time or resources to conduct an outreach program for local school districts, nor the capability to do projections for any considerable number of them.

The potential, however, is there. Given the experience of the Unit's staff with population estimation and projection and their associated pitfalls, and the availability of a good data base which could be generated through the special census, the school districts of the State of California could develop a good idea of the future level and distribution of their enrollments. All that is required is some awareness of the possibilities by local districts and a moderate increase in the resources of the Population Research Unit.

In its work with state agencies, the Population Research Unit will help local jurisdictions on request but apparently requires them to assume some part of the cost. It has run special censuses of school districts, and it has applied technical advice and computational services. The leg work is generally supplied by the district, typically by PTA volunteers.

As near as we can tell, it does not have an active outreach program to school districts of local jurisdictions.

Florida

In a study on enrollments at the University of Florida, College of Education, the demographic factors that were most troublesome, that is, the major source of error or uncertainty, were future fertility patterns and future migration. The study also pointed out that there were detailed complications in converting head count projections into full-time equivalents and that the non-compulsory nature of last year's secondary education set some limits on the use of age cohort data.[25]

Summary

While this look at the state agencies' activities I can make no claim to be exhaustive, it seems to be the case that demographic planning at the state level is not particularly sophisticated. Furthermore, as one moves down the jurisdictional ladder, the situation becomes more haphazard and spotty.

H. Some Opportunities

A significant opportunity exists to stimulate the integration of demographic data by state and local officials into educational planning. There is a place for nationally generated projections of state and local populations. There is also a useful role for state and more locally generated population projections. Demography as an applied activity has a strong subjective element in the application of judgment. Furthermore, familiarity with local circumstances can play a major part in whether a given forecast is policy useful or policy irrelevant. In general, there is not enough expertise now at the state and local level to meet this need.

The highest payoff actions meeting the clearest needs are those involved in the generation and distribution of knowledge about demographic trends to relevant state and local government planners. This generation and dispensing action could flow out of research, monitoring, surveys and data gathering and to some extent from demonstrations.

The second major action area is building capacity at the state and local level for better, more effective, and timely planning in response to unfolding demographic trends.

Some of the detailed actions which seem to be possible and effective in dealing with the situation are drawn together in Section I.

VIII. RESPONSES TO DECLINE

The previous section pointed out there were three general responses to declining enrollments:

- contract
- expand services to present clienteles
- expand services to new clienteles

The previous section dealt primarily with the first of these options. This section deals with the expansion of services; first, through expanded child care, and second, through meeting adult learning needs.[1]

A. Expanded Child Care

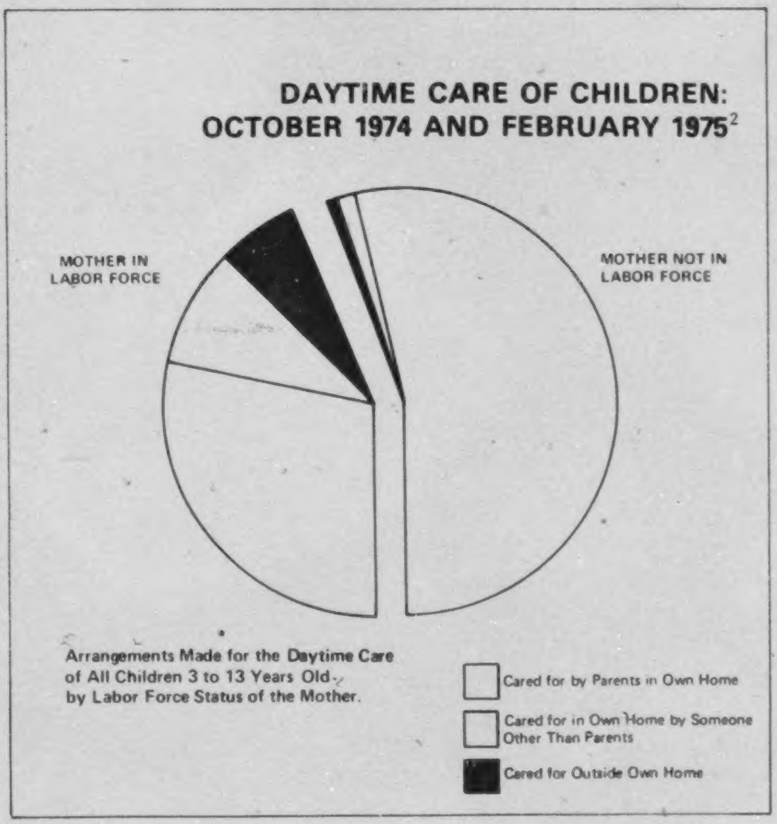
Meeting the market for various new and expanded day care and child care services is compatible with several demographic, and non-demographic, and non-demographic factors. These are:

- surplus or underutilized capacity;
- surplus teachers who represent partially trained skills to deal with children in expanded service contexts;
- single-parent families--presumably with more stressful environments, less parenting time and more need for services;
- more working mothers with
  - more preschool children,
  - needs for care for children, particularly aged 6 to 13 in the after school period;
- changing ethnic and social patterns especially in large cities, requiring more services.

These affect the demand for educational and child-care services. Women in the labor force must have some alternate form of child-care. There are various alternatives which depend on the age of the child and the services currently in existence. If her child is under 3 years old, a mother who works generally must find some day-care arrangement for her child. She will either arrange for individual care in her own home or outside--in another home or place her child in a day-care center. If she has children between 3 and 5 years of age, a mother may enroll them in school, full-day or part-day, and then have some other form of day-care for the remainder of the day. If the child is 6 to 17 years old, there is demand for after school hour services. These range from purely custodial services to organized extra-curricular activities and school sponsored clubs to after school classes.

Very little is known about the number, kind, type and duration of pre-school and after-hour elementary school services now available to children of working mothers. We also know only a little about the preferences of these mothers; that is, whether if given a choice, they would prefer care in their home by a relative or a non-relative or prefer enrolling their children in day-care or pre-school programs. The current practice of working women with small children is to choose relatives or friends rather than formal day care centers (Figure 67). However, the

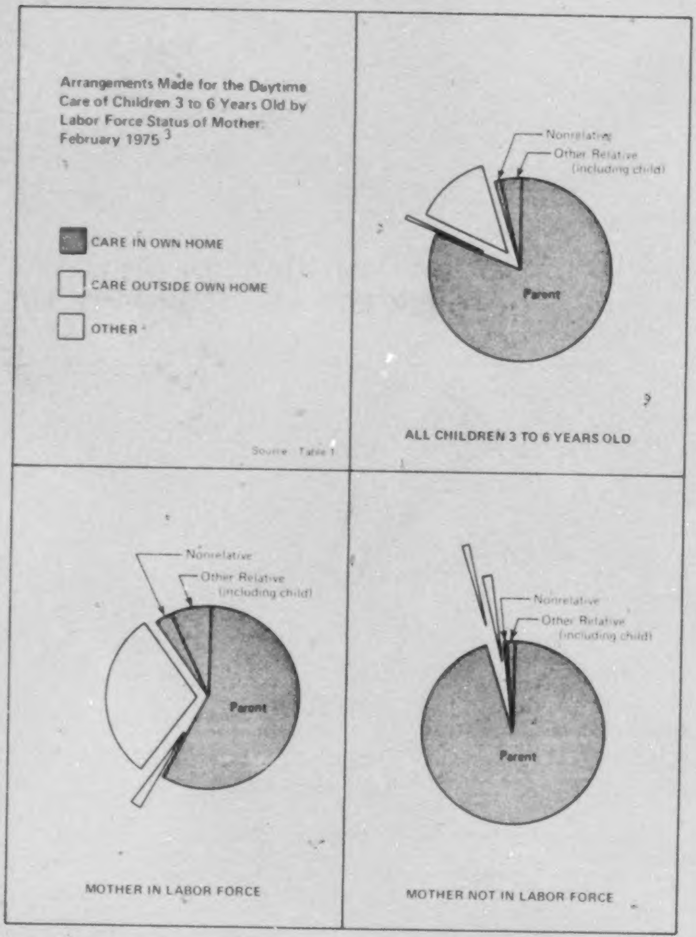
FIGURE 67



DAYTIME CARE OF CHILDREN: OCTOBER 1974 AND FEBRUARY 1975[2]

Arrangements Made for the Daytime Care of All Children 3 to 13 Years Old, by Labor Force Status of the Mother.

FIGURE 68



Arrangements Made for the Daytime Care of Children 3 to 6 Years Old by Labor Force Status of Mother: February 1975 [3] growth in nursery schools for educational purposes is proof that families may place young children in facilities that are more than custodial. The growth in pre-school day care will depend on the interaction of the quality of services available and their relative accessibility for the children of working mothers.

Nursery School and Kindergarten Enrollment

The number of children 3 to 5 years old declined in the past decade, but in the same period the number of children enrolled in pre-elementary school programs increased (Figure 69). The greatest proportional increase has occurred in the nursery schools, where the enrollment doubled. Kindergarten enrollment, which has increased rapidly before, increased also by about a quarter. In 1976, about half of the 3 to 5 years old children were enrolled in pre-school programs (Table 72 and Figures 70 and 71).

Both Black and white children are enrolled at higher rates. Enrollment increases have occurred for children of mothers in the labor force and for children whose mothers are not in the labor force. Enrollment rates of children are strongly related also to the educational attainment of employed mothers.

TABLE 72

PROGRAMS BY YEARS OF SCHOOL COMPLETED BY MOTHER[4]

PERCENT OF 3 TO 5 YEAR OLDS ENROLLED IN PRE-ELEMENTARY

October 1967 to 1976 [4]

(Civilian noninstitutional population)

Years of school completed by mother	1976	1974	1970	1967
Total 3 to 5 years old	49.4	45.2	37.6	31.5
Elementary: 8 yrs. or less	38.3	30.8	22.4	20.5
High School: 1 to 3 years	38.6	36.0	31.9	26.1
High School: 4 years	47.9	43.8	38.0	32.2
College: 1 to 3 years	56.6	54.2	48.7	41.3
College: 4 years or more	70.4	65.3	55.8	48.7

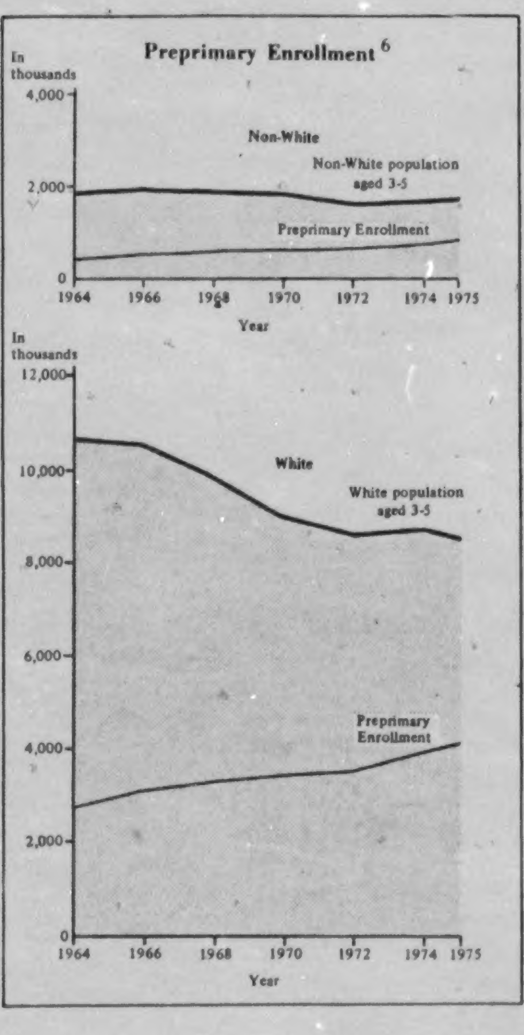
To a large extent, differences in enrollment rates may now be due to differential accessibility of programs. Enrollment rates are highest in metropolitan areas. They are also higher in the Northeast and in the West rather than in the North Central or Southern regions of the United States.

Enrollments in prekindergarten for whites and other ethnic groups increase with income, but most sharply increase at the $10,000 and over income bracket (Figures 72 and 73).

There are some data on day-care arrangements for children under age six as a function of race, socio-economic status and income resulting from the work of Shortlidge. While this research is interesting and suggestive, it hardly forms a total base for public policy. In general, as it now stands, the following flow out of Shortlidge and Low and Spindler's work.[5] (Tables 74, 75 and 76):

- o Most children are cared for in their own home--white or Black--(56 percent and 71 percent) or in another person's home (18 percent, 17 percent) as of 1971.

FIGURE 69



Preprimary Enrollment [6]

FIGURE 70

PERCENT ENROLLED IN PRE-ELEMENTARY PROGRAMS: 3, 4 AND 5 YEAR OLDS OCTOBER 1967-1976[7]

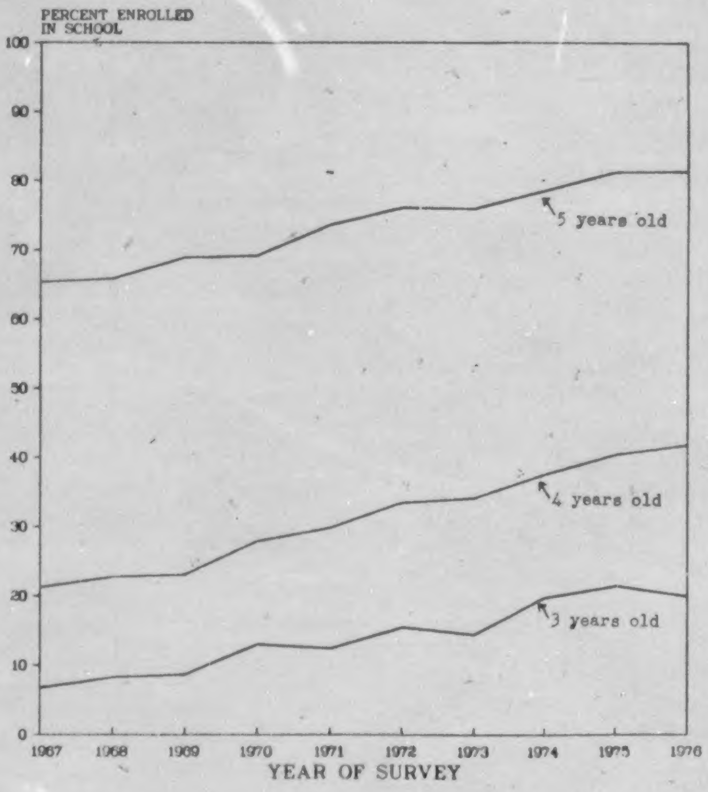


FIGURE 71

. NUMBER OF 3 TO 5 YEAR OLD CHILDREN ENROLLED IN NURSERY SCHOOL AND KINDERGARDEN: Oct. 1967–1976 [8]

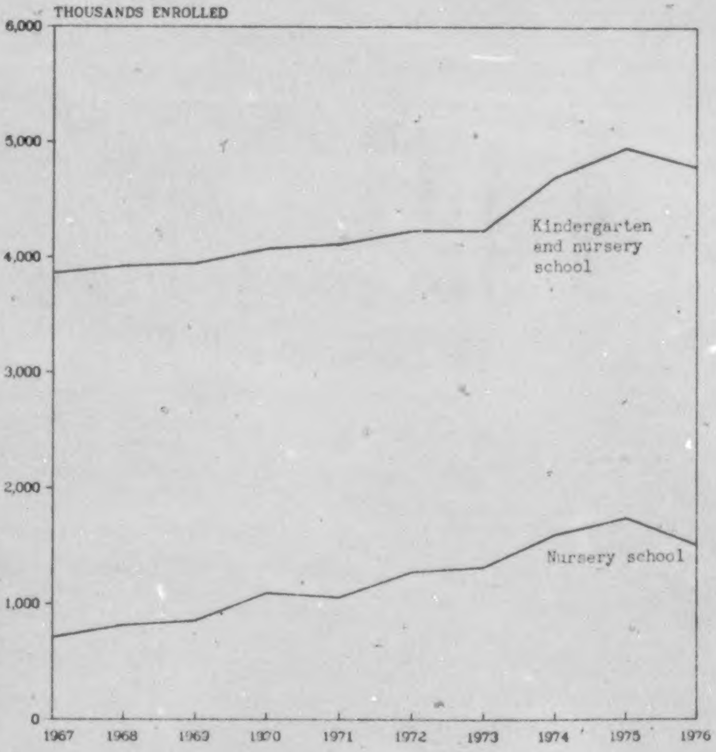


FIGURE 72

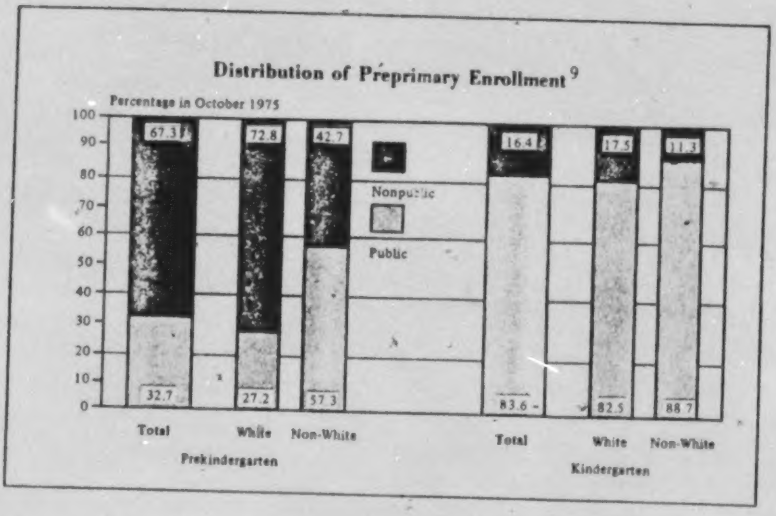
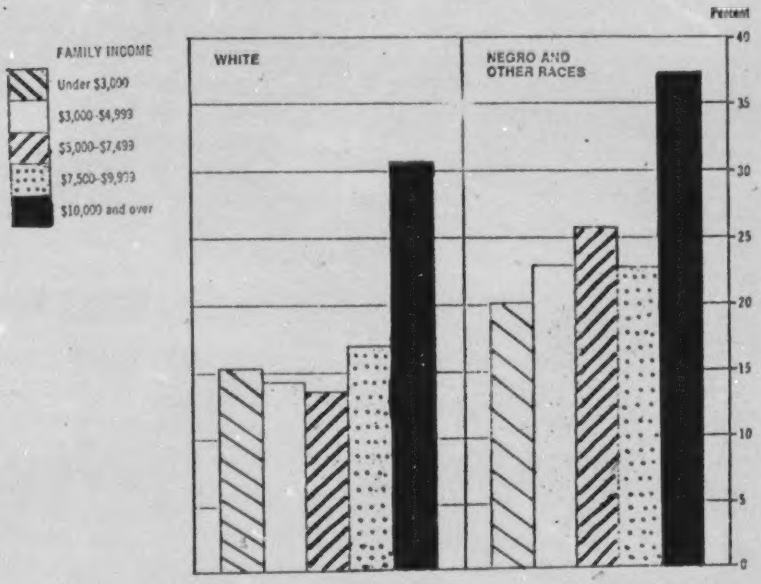

Distribution of Preprimary Enrollment 9
Percentage in October 1975
100
90
80
70
60
50
40
30
20
10
0
67.3
32.7
72.8
27.2
42.7
57.3
Nonpublic
Public
16.4
83.6
17.5
82.5
11.3
88.7
Total
White
Non-White
Prekindergarten
Total
White
Non-White
Kindergarten

FIGURE 73

PREKINDERGARTEN ENROLLMENT,
BY FAMILY INCOME AND RACE:
1970-1972[10]



- Using a standard index of socio-economic status (SES), there is a tendency for children in both the low and the high socio-economic status groups to be cared for in their own homes--56 and 62 percent. For the middle SES groups, 49 percent were cared for in the home.
- The tendency across all economic categories under $3,000 to $10,000 and above, was again care in the home or care in another person's home, running about 47 and 31 percent respectively. A slight deviation for those earning $3,000 to $6,000 in which only 38.8 percent were cared for in their own home and 36 percent in others' homes is visible.

The future day care market for children aged six or younger with mothers in the work force can be estimated from the data in Table 72. There were about six million such children in 1973, a half-million more than in 1970.

2. Some Questions About Expanded Child-Care Services in Schools

This issue does not concern whether the schools should expand to perform new services since they are and will be performing them well or badly, overtly or by default. The more appropriate question seems to be one of choice: should the school attempt to optimize its beneficial impact on these large numbers of special population children? Or should it attempt to minimize the damage it does to them? In any case, the following points seem to merit further attention in terms of any public policy alternatives with regard to expanded day care.

- There are data which suggest that the crucial problem facing mothers these days is finding available service. We know, in fact, very little about the number, kind, type and duration of preschool services available to children of working mothers, and we know very little about the child-care choices that are made by working mothers or the basis for attractive opportunities and further expansion.[11]
- The choices for this new clientele would probably be influenced by such factors as nearness to home, size of the facility, access, services, scheduling. But we know very little in this regard. Unfortunately, issues involving day care, child care, and nursery schools are rapidly becoming politicized and advocacy oriented. Hence, close attention must be given to gathering reliable planning data
- Meeting the needs of the latch key child, that is, the child from nominally six to thirteen, who finishes up the school day and has relatively little to do thereafter, does not necessarily imply an expanded day for the now working teacher, nor does it even imply employment for certified teachers. There are a variety of other recreational, custodial and learning opportunities,

TABLE 73

NUMBER OF CHILDREN UNDER AGE SIX WITH MOTHERS IN THE LABOR FORCE, 1970-1973[12]

	1970	1972	1973
Total children under age 6	19,606,000	19,235,000	19,145,000
With mother in labor force	5,590,000	5,607,000	5,952,000
Percentage of children under age 6 with mother in the labor force	28.5%	29.1%	31.1%

the principal value of which would be in using the physical school facility at which the child is already located.

- Any expanded kind of care service under governmental guidance seem inevitably destined to become a candidate for credentialism, standardization of performance and quality of facilities inducing an inevitable rise in the costs either to the public purse or to the participating parent.

Consequently, close attention should be given to any move toward institutionalization which may, in fact, have the effect of driving the most needy clientele out of the system of gratuitiously raising costs. Since large numbers of women are purposely selecting part-time work and since more women are selecting paid labor over volunteer work, attention should be given to utilizing available part-time working mothers in such child-care arrangements.

- Since the greatest demand implicit if not explicit for expanded child-care services will be in large metropolitan areas with large numbers of working women and other, special, high-service need populations, the opportunity costs of expanding day care services through school must be weighed and measured against other educational options.

TABLE 74

PERCENT DISTRIBUTION OF DAY-CARE ARRANGEMENTS FOR CHILDREN UNDER AGE SIX BY FAMILY INCOME 13

Day-Care Arrangement	Under $3,000	$3,000 to $5,999	$6,000 to $9,999	$10,000 and Above	All Incomes
Care in own home					
Father	6.3%	13.4%	20.3%	13.3%	14.7%
Other relative					
Under 6 years old	7.6	1.2	1.3	0.4	2.1
6 years old and over	21.7	13.4	14.2	11.7	11.8
Nonrelative					
Who looked after children	6.5	6.7	11.8	9.9	8.7
Who did additional household chores	1.8	4.1	7.3	15.4	6.5
Subtotal	43.9%	38.8%	54.9%	50.7%	46.8%
Care in another person's home					
Relative	15.2%	17.8%	14.5%	8.9%	14.9%
Nonrelative	14.5	18.5	14.0	17.8	16.2
Subtotal	29.7%	36.3%	28.5%	26.7%	31.1%
Other arrangements					
Care in group care center	3.4%	6.8%	4.1%	7.7%	5.4%
Child looked after self	1.6	0.7	0.2	--	0.6
Mother cares for child at work	20.8	17.7	10.6	12.9	15.0
Mother cares for child after school	0.4	0.2	1.1	2.2	0.8
Other	--	0.2	0.7	--	0.3
Subtotal	26.2%	25.6%	16.7%	22.8%	22.1%
Total*	100%	100%	100%	100%	100%

*Totals may not add because of rounding.

TABLE 75

PERCENT DISTRIBUTION OF DAY-CARE ARRANGEMENTS FOR WHITE MOTHERS* WITH YOUNGEST CHILD UNDER AGE SIX, BY[14] SOCIOECONOMIC STATUS (Duncan Index)

Day-Care Arrangement	Low SES	Middle SES	High SES
Care in own home			
By father	19%	15%	7%
By sibling	13	6	12
By other relative	5	5	12
By a combination of family members	5	13	14
By family and nonfamily members	7	7	7
By nonrelative	10	3	10
Subtotal	59%	49%	62%
Care in another person's home			
By relative	5%	5%	2%
By nonrelative	13	17	10
Subtotal	18%	22%	12%
Other arrangements			
Public-group day care	0%	2%	0%
Private-group day care	4	8	2
Public- or private-group day care with another means	2	3	6
Child cares for self	1	6	0
Mother cares for child at work	7	8	7
Mother cares for child after school	2	0	4
Other means or combination	6	3	8
Subtotal	22%	30%	27%
Total†	100%	100%	100%

---

*Respondents interviewed in 1967, 1969, and 1971, who were in the labor force in 1971.

†Totals may not add because of rounding.

TABLE 76

DAY-CARE ARRANGEMENTS FOR CHILDREN UNDER AGE SIX FOR 1965 AND 1971, BY RACE [15]

Day-Care Arrangements	1965		1971	
	Whites	Nonwhites	Whites	Nonwhites
Care in own home				
By father	16%	9%	15%	9%
By other relative	15	28	17	25
By combination of family and nonfamily members	--	--	17	15
By nonrelative	17	7	7	12
Subtotal	48%	44%	56%	61%
Care in another person's home				
By relative	13%	24%	4%	9%
By nonrelative	15	18	14	8
Subtotal	28%	42%	18%	17%
Other arrangements				
Care in group care center	6%	6%	8%	15%
Child cares for self	1	0	3	0
Mother cares for child at work	16	9	7	4
Mother cares for child after school	1	1	1	2
Other	0	0	8	2
Subtotal	24%	16%	26%	23%
Total*	100%	100%	100%	100%

*Totals may not add because of rounding.

- The growth of flex time and other alternative work scheoules may reduce the demand for child care services by giving more conveniently allocated discretionary time to parents.

Social Psychological Effects

Several independent lines of evidence moderate enthusiasm for extended child and day care services in institutional settings be moderated by the major unknown, uncertain, questionable, or even adverse effects on the child suggested by current knowledge

Effects on the social and intellectual development of the child are the subject of a recent National Research Council report. Toward a National Policy for Children and Families. It summarizes research on the effects of day care on child development. In general, that report written by Professor Brofenbrenner, points out that:16

> ...taken as whole the findings on the influence of type of care on intellectual development are essentially negative but again must be interpreted with several important qualifications. First, the results are based on only a few studies. Second, the day care centers represented only are small in number and of high quality. Third, and most serious, the available data on possible long-range effects are limited to a single study with the single measure (I.Q.) based on the sample of only eleven pairs of children and providing information only through the fifth year of life. It may be that the type of child care does make some difference in other aspects of cognitive development or the defects do not become apparent until the child entered school. We do not and will not know the significance of types of care on cognitive development until follow-up studies are carried out.

Further points along this line will be made below in relation to the works Zajonc.

With regard to the emotional effects on the child, Bronfenbrenner continues, "...just as the existing data do not warrant regarding day care as an emotionally harmful experience, they do not rule out the risk of some negative effects." 17

With regard to the effects of motivation and social behavior, ..."early day care experience may not adversely effect adjustment with peers but may slow acquisition of some adult cultural value." Quoting from works of two other investigators, Bronfenbrenner reports that "...compared with home-reared children, three to four year olds, who have been in all-day care groups for most of their lives, spent more time in large muscle activity areas of the center and less time in expressive and cognitive areas." 18

These guarded and cautionary reviews of day care should further be examined against the evidence that communal systems of child care may produce different personality characteristcs. As noted in a recent report by the Association of American Colleges: 19

> .....More studies of child care in China, Israel, and Russia are needed to see how children raised in infant centers developed as compared to those raised in the family. If government policy encourages the establishment of child-care centers, what are the best arrangements of such centers? What are the advantages and disadvantages of the collective versus home care? What does each plan offer to the woman who does or does not want to work? It must be recognized that the women are the key to preschool socialization, so the whole question is inextricably entwined with the issue of whether, when, and where mothers work.

The question of whether expanding child-care services should be limited or should principally serve the needs of working women is an open question, since it may very well be to society's advantage to expand such services to women who are not working but have other alternative time-consuming activities.

Zajonc of the University of Michigan has been engaged for several years in studying relationships between birth order, family size, and intelligence. His work raises questions as to whether it is sound public policy to encourage the aggregation of large numbers of children with each other for extended periods of time. The cautionary implicit in his work is of such commanding importance that it must not be overlooked in framing future public policy on child care.

Figure 74 compares the situation in several nations, the Netherlands, United States, France, Scotland on the relationship between intellectual performance and birth order, and family size. The same trend, a negative relationship between birth order and intellectual performance, is shown in each case.

Zajonc has shown that intellectual performance increases as family size goes down. More specifically, it increases with delays between the births of children. His theory is that the larger family offers an average lower quality intellectual environment. Therefore, an average child in a large family has a less stimulating intellectual environment than his counterpart in a small family.

Figures 75 and 76:

> ...plot intellectual performance scores against the average order of births. Average order of births for a given year is calculated from the census data and it is a rather simple index of family configuration for a given cohort. Each year a large number of children are born. Some of these children are first children of the given mother, some are second, others third, etc. Thus, for each year we can readily calculate the average position in the family of the children born that year. If this value is 3.00, for example, this means that the children born that year were on the average third children of their mothers. If it is 2.00, they were on the average second children. If you now look at the data in Figure 76, for example, it is an inescapable conclusion that children born in the 50's (and taking their SAT's in the late 60's), were coming into families that had fewer previous offspring than children born in the 60's (and taking their SAT's now). Of course, we do not know to what extent there were further births in the families for all these cohorts, but note that a child born in 1947 was on the average 2.4th whereas a child born in 1962 was on the average 3.00rd.* 20

Zajonc's data indicates that one may anticipate that the present decline in SAT scores will stop and turn around even if nothing else changes (Figure 76).

Since the average family size is changing, if Zajonc's theory is correct, there are implications for the growing tendency toward nursery schools. The same argument that argues that the decline in test scores is associated with children being in too much contact with children, would argue that the growth of nursery schools, and day care, will have an adverse affect on the intellectual development of children in such a system.

The basic argument is that children in the company of other children are less intellectually stimulated than they are in the presence of adults or older children. Consequently, public policies which would put large numbers of young children in conjunction with each other for relatively extended periods, would be putting them in a less intellectually stimulating environment than one populated by adults.

The work of Zajonc is by no means above criticism. For example, it is the case that the average size of families headed by women increased in the 1950's in the United States, but the average sib-ship, that is, the number of children in the average family, declined. Basically, more women were having children, but the number of children per family has declined. Further study of this relationship to Zajonc's concept could be useful.

Zajonc's analysis has not held the educational level of the mother constant yet we know this is a key variable-in achievement.[21] He points out however, that:

> ...the negative effects of family size occur within all socio-economic levels. John Claudy has recently found the identical pattern with 81,175 twelfth graders tested by TALENT ...(Figure 77). It is well-known that IQ in the mother varies quite substantially with her SES, and if the negative family size effects were merely a reflection of less intelligent mothers having larger families, the parallel trends for all SES levels would not have been found.[22]

Other relationships are suggested by Zajonc and his associate's research on the influence of children on the intellectual environment. The intellectual development of children suggests that women's entry into the labor force correlates highly with delays in marriage and with delays in childbearing. The work in Aberdeen, cited earlier in this paper, shows that intelligence increases with the age of the mother. It may be because better educated women delay marriage and delay having families.

The effect which seems to be independent of birth order is not well understood. A second element coming out of a comprehensive review of the literature on parental absence shows an intelligence decline even when the absence is for a relatively short time.[23] This research suggests strong implications for compensatory education and services at the elementary and secondary school level.

Again in the period of declining enrollments, the suggestion of peer teaching, of student teaching student, comes forward. The data to date suggests that children may benefit by being taught by peers. More important and more real is that children benefit from teaching other children. While it may be a little too late to resurrect the little red school house with its each-one-teach-one environment, it may not be unreasonable to consider modifying school practices to permit older, more advanced or more knowledgeable students to tutor the less advanced.[24]

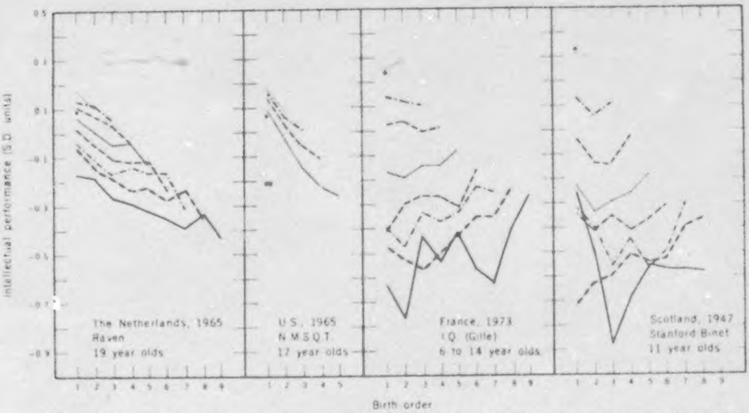
B. Adults as a School Market

A second major, new clientele for declining school systems may be adults with a latent demand for educational assistance. While the day care function largely focuses on elementary school and junior high school use, the needs of adults may best be met by the physical facilities, if not the teaching staff, of high schools.

Several factors may influence the demand for adult education in the future:

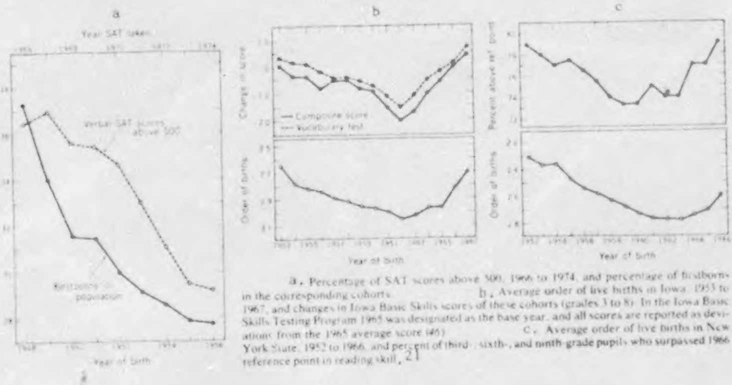
- As the baby boom bulge matures, there will be an increase in the proportion of middle-aged and elderly. That may have several effects:

FIGURE 74



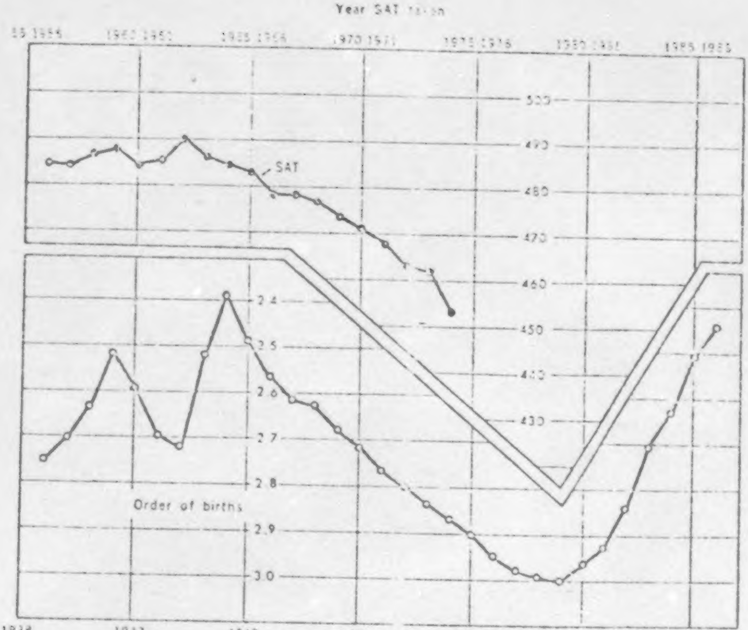
Intellectual performance of four large populations, plotted as function of birth order and family size. Separate curves in each graph represent different family sizes, which can be read from the last birth order on each curve. Solid circles represent only children. The double open circle in the U.S. data represents twins. The years show when data were collected. The means of the Dutch, American, French, and Scottish data sets are 2.82, 102.5, 99.2, and 36.74 respectively. The corresponding standard deviations are 1.43, 21.25, 14.53, and 16.10. 25

FIGURE 75



a. Percentage of SAT scores above 500, 1966 to 1974, and percentage of firstborns in the corresponding cohorts. b. Average order of live births in Iowa, 1953 to 1967, and changes in Iowa Basic Skills scores of these cohorts (grades 3 to 8). In the Iowa Basic Skills Testing Program 1965 was designated as the base year, and all scores are reported as deviations from the 1965 average score (46). c. Average order of live births in New York State, 1952 to 1966, and percent of third-, sixth-, and ninth-grade pupils who surpassed 1966 reference point in reading skill. 21

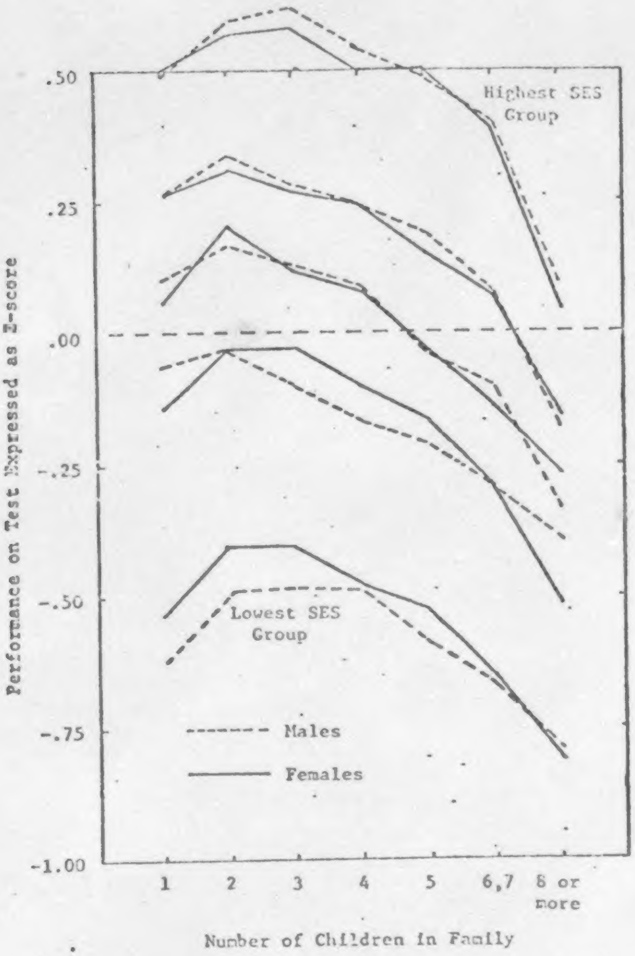
FIGURE 76



Average order of live births in the United States, 1939 to 1959, and average SAT scores for the first 18 cohorts. Future SAT averages are predicted to lie within the shaded area.[27]

FIGURE 77

IQ Composite Performance as a function of Family Size and Socioeconomic Status[28]



- Shifts in mandatory retirement requirements to older ages to meet labor-force needs.
- Longer time spent in the work force may extend the mid-career concept from the 40's to the 50's. This could have implications for the school systems by creating a new market for retraining a large middle age cohort.

o The interesting response to the aging of the baby bulge is that in 1985-95, the baby boom kids born in the 1950's and 1960's will be entering the 35 to 45 years old age category which in present day terms is a period in which there is a substantially renewed interest in career changes. This may fit in nicely with alternative uses for school facilities, although in fact it may be coinciding with an increase in school-age children entry into elementary school. It should, however, nicely fit the decline in high school enrollments.

o Adults throughout their lives spend a great deal of time teaching themselves. The work of Allen Tough of Canada shows a substantial portion of the adult population engages in major self-generated learning activities.[29] He finds, for example, that over the course of a year, the population engages in an average of eight separate learning activities, some 70 percent of which are self-directed. The projects involved an average expenditure of 700-800 hours. Whether this could be a significant potential market for underutilized schools and redundant school teachers merits further examination.

The minimum need which schools could meet would be providing physical facilities for teachers, self-teachers and learners to get together on their own terms. The next step might be to provide some teachers to meet the latent demand while exercising some quality control over their ability.

Obviously the program could reach any degree of aggressive elaboration, from formal classroom work to major adult extension. In the latter case, one might consider bringing in regional experts under sponsorship, or going out into the home or other locations to teach and demonstrate.

Since very little is known about the true potential of the adult market, there seem to be substantial opportunities for exploring along the lines of Alan Tough's research and for the very judicious demonstrations over a wide-range of services, to determine the best strategies, if any, for developing this market.

Other factors stimulating adult interest include the permanent upward shift in the price of petroleum with all of the associated desire to economize by making appropriate changes in our homes, appliances, automobiles, and other artifacts. Adults require knowledge and training to make these changes on their own.

These adult learning demands, latent and overt, framed around hobbies, recreation and economic training not associated with careers, ought not be confused with the well-recognized markets for career training and other credentials, such as completion of high school. Any movement by high schools in this new direction could put them in some competition for the same clientele with local institutions of higher learning, especially the junior and community colleges.

The expansion of services as an alternative is, of course, also attractive to administrators because it uses the available facilites and the surplus qualified labor. Expanded services in the form of wider curricular diversity, longer school hours, as well as expanded differentiated services to the bright, to the handicapped and catch-up studies for the bilingual, the multicultural and the deprived are other likely alternatives.

IX. SOME DATA ON SCHOOLS AND STUDENTS

A large body of data is available on schools, students and teachers, particularly as presented in the annual series, "The Condition of Education," a statistical report produced by the National Center for Educational Statistics. This section will present only minimum background material largely drawn from that statistical guide. Additional demographic material germane to the themes of this paper are also presented.

A. Observations

Two key observations to educational planning come out of these data that are crucial:

- The 187 largest school systems enrolled some 27.3 of all students. The top 734 school systems, that is, those of 10,000 or more students, enrolled 45.5 percent of students. From one point of view, focused attention to their problems may involve a set of public strategies different from that for the large number of small school systems making up the total of 16,006 operating systems.
- When one compares enrollments in the ten largest cities against those of the 50 states, the ten largest cities themselves rank as major educational entities. They are 15th, 28th, 31st, 41st, 43rd, 44th, 48th, 51st, 53rd, and 56th in size. The enrollment of New York City, for example, exceeds that of 36 states.

B. The Data

A summary of the expenditures for elementary and secondary schools are displayed in Figures 78, 79 and 80.

> Since 1960, the total expenditures for the elementary and secondary school system reached $81.9 billion; 8 percent coming from Federal sources, 38 percent from state, 42 percent from local and 11 percent from others.

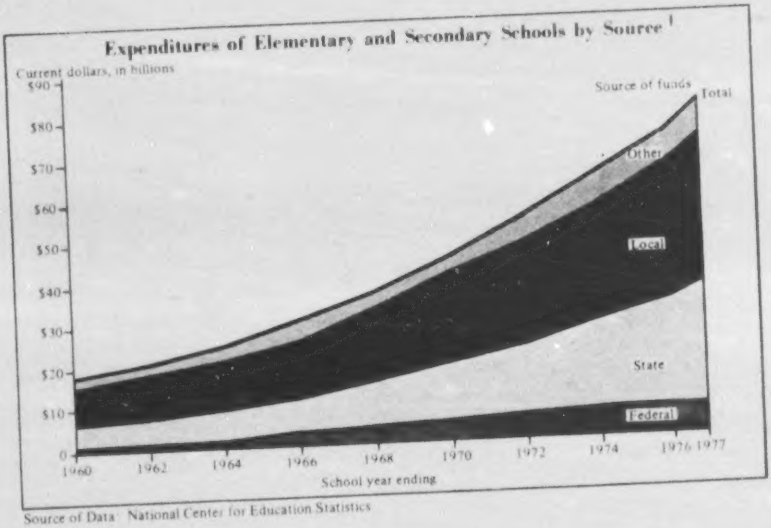
Current expenditures, as shown in Figure 78, far exceed capital outlays or interest. Current expenditures alone are expected to increase to $83.2 billion, in constant 1975-76 dollars, by 1980 with a small decline in capital outlay and interest holding steady (Figure 79).

The current cost per pupil now runs to $1388 and, at least, by one extrapolation in cost and dollars, by 1980 will reach $1665 per pupil (Figure 80).

There are, as of 1975, some 44,700,000 students in public schools throughout the United States (Table 77).

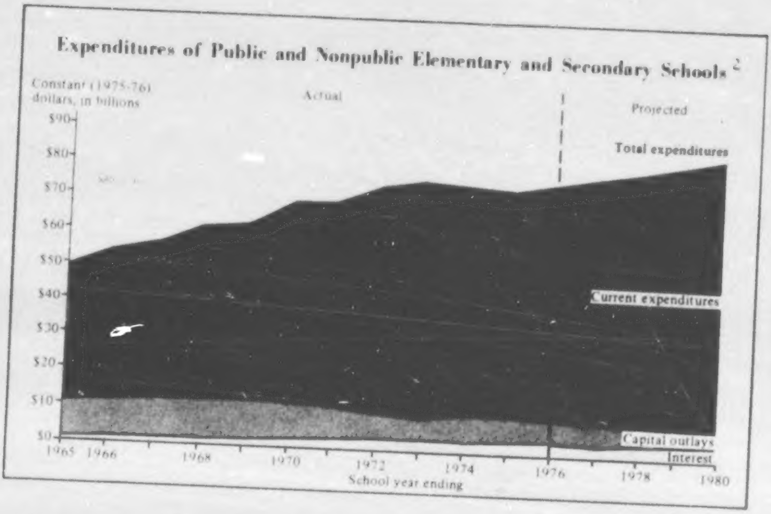
Those students are overwhelmingly clustered in the largest school systems. Table 78 shows that the ten largest cities themselves rank as 15th, 28th, 31st, 41st, 43rd, 44th, 48th, 51st, 53rd, and 56th, as independent educational entities when one compares the

FIGURE 78



Source of Data: National Center for Education Statistics

FIGURE 79



Expenditures of Public and Nonpublic Elementary and Secondary Schools [2]

FIGURE 80

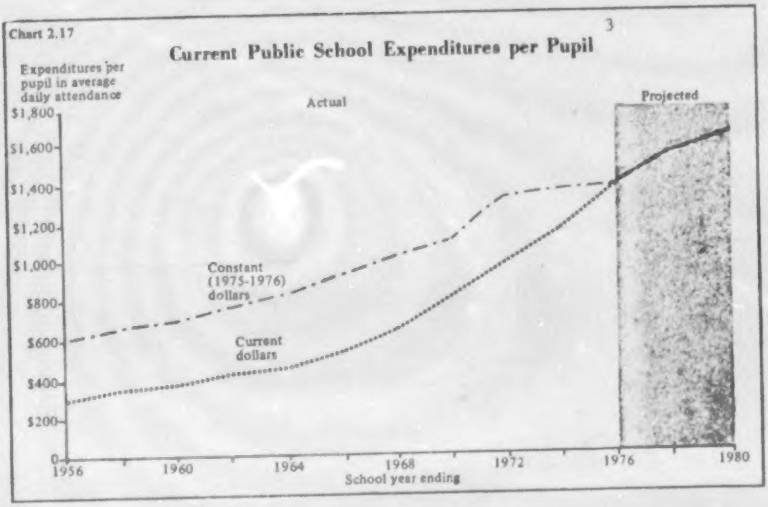


Chart 2.17
3
Current Public School Expenditures per Pupil
Expenditures per pupil in average daily attendance
Actual
Projected
$1,800
$1,600
$1,400
$1,200
$1,000
$800
$600
$400
$200
0
Constant (1975-1976) dollars
Current dollars
1956
1960
1964
1968
1972
1976
1980
School year ending

TABLE 77

Number of Public School Pupils, by State [4]

State or other area	Fall, 1962	Fall, 1964	Fall, 1966	Fall, 1968	Fall, 1970	Fall, 1972	Fall, 1974	Fall, 1975[1]
Total United States	38,837	41,416	43,055	44,962	45,903	45,753	45,056	44,700
Alabama	812	821	873	832	805	733	764	757
Alaska	50	56	62	72	80	85	87	86
Arizona	353	366	383	411	440	485	487	483
Arkansas	436	448	451	453	463	461	455	451
California	3,735	4,140	358	4,582	4,633	4,501	4,428	4,394
Colorado	438	476	499	524	550	574	568	563
Connecticut	520	560	597	632	662	665	660	655
Deleware	92	105	113	125	133	134	131	129
District of Columbia	133	141	147	149	146	140	132	130
Florida	1,094	1,184	1,260	1,356	1,428	1,514	1,557	1,544
Georgia	991	1,042	1,074	1,103	1,099	1,090	1,082	1,072
Hawaii	152	158	166	172	181	182	177	175
Idaho	167	173	175	179	182	185	188	186
Illinois	1,890	2,043	2,159	2,274	2,357	2,349	2,296	2,278
Indiana	1,029	1,100	1,155	1,205	1,232	1,221	1,187	1,177
Iowa	598	620	636	558	660	646	618	616
Kansas	502	506	516	522	512	475	450	446
Kentucky	647	663	675	699	717	715	701	695
Louisiana	760	786	821	865	842	846	841	833
Maine	213	218	222	232	245	250	251	248
Maryland	668	736	741	859	916	921	894	887
Massachusetts	943	993	1,083	1,113	1,168	1,203	1,200	1,200
Michigan	1,792	1,919	2,015	2,124	2,181	2,198	2,138	2,121
Minnesota	733	788	835	895	921	910	890	884
Mississippi	563	579	581	582	534	526	514	509
Missouri	858	948	964	1,056	1,040	1,030	1,002	994
Montana	157	165	168	173	177	180	172	171
Nebraska	301	317	319	329	329	329	319	316
Nevada	80	100	103	118	128	132	137	136
New Hampshire	116	125	134	146	159	168	172	171
New Jersey	1,159	1,255	1,326	1,422	1,482	1,510	1,470	1,458
New Mexico	239	260	271	273	281	285	282	280
New York	2,943	3,130	3,249	3,411	3,477	3,524	3,436	3,411
North Carolina	1,140	1,179	1,184	1,195	1,192	1,161	1,178	1,169
North Dakota	142	148	148	149	147	142	133	132
Ohio	2,082	2,230	2,320	2,384	2,426	2,423	2,330	2,314
Oklahoma	562	600	595	604	627	607	596	591
Oregon	413	441	474	490	480	472	477	473
Pennsylvania	2,059	2,212	2,211	2,310	2,358	2,361	2,278	2,261
Rhode Island	143	151	160	173	188	190	179	177
South Carolina	611	633	642	649	638	624	627	622
South Dakota	160	164	168	167	166	162	154	153
Tennessee	838	864	874	884	900	892	873	865
Texas	2,291	2,464	2,563	2,704	2,840	2,738	2,785	2,762
Utah	258	283	292	301	304	306	306	304
Vermont	78	82	88	100	103	107	105	104
Virginia	906	969	1,003	1,056	1,079	1,069	1,073	1,081
Washington	685	719	753	804	818	791	786	779
West Virginia	436	436	421	410	400	410	404	401
Wisconsin	767	831	890	954	994	995	974	963
Wyoming	83	88	85	86	87	86	87	85
Outlying areas:	634	662	701	711	734	780	786	783
American Samoa	6	7	8	8	9	8	10	10
Canal Zone	13	13	13	14	13	13	11	11
Guam	15	16	18	21	25	27	28	28
Puerto Rico	592	618	651	668	687	711	713	710
Virgin Islands	8	9	11	—	—	21	23	24

[1] Estimated.

NOTE.–State and area figures may not add up to total figures because of rounding.

TABLE 78

Public Elementary and Secondary School Enrollment in States and Large Cities[5]

States and large cities, ranked by enrollment	Rank	Enrollment in Fall 1975
California	1	4,419,571
New York	2	3,401,214
Texas	3	2,812,888
Ohio	4	2,292,647
Illinois	5	2,269,892
Pennsylvania	6	2,246,218
Michigan	7	2,073,288
Florida	8	1,551,373
New Jersey	9	1,458,000
Indiana	10	1,226,208
Massachusetts	11	1,198,410
North Carolina	12	1,184,996
Virginia	13	1,103,669
Georgia	14	1,090,292
New York City, N.Y.	15	1,085,807
Missouri	16	965,360
Wisconsin	17	964,219
Maryland	18	880,927
Minnesota	19	879,944
Tennessee	20	876,926
Lousiana	21	847,202
Washington	22	785,449
Alabama	23	759,346
Kentucky	24	691,612
Connecticut	25	652,449
South Carolina	26	629,729
Iowa	27	612,111
Los Angeles, Calif.	28	608,998
Oklahoma	29	594,816
Colorada	30	569,128
Chicago, Ill.	31	526,716
Mississippi	32	512,407
Arizona	33	492,995
Oregon	34	477,559
Arkansas	35	456,703
Kansas	36	448,064
West Virginia	37	404,119
Nebraska	38	315,669
Utah	39	309,708
New Mexico	40	274,612
Philadelphia, Pa.	41	265,674
Maine	42	250,931
Detroit, Mich.	43	248,007
Houston, Tex.	44	208,681
Idaho	45	196,616
Hawaii	46	176,430
Rhode Island	47	176,317
Phoenix, Ariz.	48	175,111
New Hampshire	49	174,597
Montana	50	171,788
Baltimore, Md.	51	166,370
South Dakota	52	151,217
Dallas, Tex.	53	151,187
Nevada	54	139,745
North Dakota	55	131,331
Washington, D.C.	56	129,969
Delaware	57	127,476
Vermont	58	104,874
Alaska	59	89,295
Wyoming	60	88,184

ten largest cities and the 50 states by enrollment. The enrollment of New York City for example exceeds that of 36 states.

The same data presented regionally by state in Table 79 gives a closer look at the distribution since 1962. Tables 80 and 81 compare 1965 and 1975 of the largest state systems.

California, enrolls approximately 10 percent of the students, New York 7.6 percent, and about 5 percent each are enrolled by Illinois, Michigan, Ohio, Pennsylvania and Texas. The very largest municiple systems--New York, Los Angeles and Chicago, in 1975, respectively enrolled 2.42, 1.36 and 1.17 percent of all students. The fifteen largest school systems together enrolled 8.87 percent of all students (Table 81).

The top 187 school districts, in 1975, each of which contained 25,000 or more students, enrolled 27.3 percent of all students. The top 735 school districts, that is those with 10,000 or more students, enrolled 45.5 percent of all students (Table 82).

The extent of this aggregation and the prominence of the first 187 and first 735 school systems are not surprising when one looks at the enormous rate of consolidation of the school system. In 1959-60, there were 40,500 school systems, and in 1975-76, there were 16,300. In recent years the most extensive degree of consolidation has been in the central regions. The West, Northeast, and Southeast have been stable since about 1966 (Figures 81 and 82).

TABLE 79

Elementary and Secondary Public School Enrollment, by State 6

State or other area	Fall 1962	Fall 1964	Fall 1966	Fall 1968	Fall 1970	Fall 1972	Fall 1974	Fall 1975
				(In thousands)				
United States	**38,837**	**41,416**	**43,055**	**44,962**	**45,903**	**45,753**	**45,056**	**44,838**
Northeastern Region	8,174	8,726	9,070	9,537	9,842	9,978	9,760	9,662
New England	2,013	2,129	2,284	2,395	2,525	2,583	2,577	2,557
Maine	213	218	222	232	245	250	251	251
New Hampshire	116	125	134	146	159	168	172	175
Vermont	78	82	88	100	103	107	105	105
Massachusetts	943	993	1,083	1,112	1,168	1,203	1,210	1,198
Rhode Island	143	151	160	173	188	190	179	176
Connecticut	520	560	597	632	662	665	660	652
Middle Atlantic	6,161	6,597	6,786	7,142	7,317	7,395	7,183	7,105
New York	2,943	3,130	3,249	3,411	3,477	3,524	3,436	3,401
New Jersey	1,159	1,255	1,326	1,421	1,482	1,510	1,470	1,458
Pennsylvania	2,059	2,212	2,211	2,310	2,358	2,361	2,277	2,246
North Central Region	10,854	11,614	12,125	12,717	12,963	12,880	12,490	12,329
East North Central	7,560	8,123	8,539	8,941	9,189	9,186	8,925	8,826
Ohio	2,082	2,230	2,320	2,384	2,426	2,423	2,330	2,293
Indiana	1,029	1,100	1,155	1,205	1,231	1,221	1,187	1,226
Illinois	1,890	2,043	2,159	2,274	2,357	2,349	2,296	2,270
Michigan	1,792	1,919	2,015	2,124	2,181	2,198	2,138	2,073
Wisconsin	767	831	890	954	994	995	974	964
West North Central	3,294	3,491	3,586	3,776	3,774	3,694	3,565	3,503
Minnesota	733	788	835	895	921	910	890	850
Iowa	598	620	636	658	660	646	617	612
Missouri	858	948	964	1,056	1,039	1,030	1,002	965
North Dakota	142	148	148	149	147	142	133	131
South Dakota	160	164	168	167	166	162	154	151
Nebraska	301	317	319	329	329	329	319	316
Kansas	502	506	516	522	512	475	450	448
Southern Region	12,981	13,650	14,069	14,525	14,759	14,631	14,624	14,654
South Atlantic	6,071	6,425	6,635	6,902	7,031	7,063	7,097	7,102
Delaware	92	105	113	125	133	134	131	127
Maryland	668	736	791	859	916	921	894	881
District of Columbia	133	141	147	149	146	140	132	130
Virginia	906	969	1,003	1,056	1,079	1,069	1,093	1,104
West Virginia	436	436	421	410	400	410	404	404
North Carolina	1,140	1,179	1,184	1,195	1,192	1,161	1,178	1,185
South Carolina	611	633	642	649	638	624	627	630
Georgia	991	1,042	1,074	1,103	1,099	1,090	1,081	1,090
Florida	1,094	1,184	1,260	1,356	1,428	1,514	1,557	1,551
East South Central	2,860	2,927	3,001	2,997	2,956	2,916	2,851	2,840
Kentucky	647	663	674	699	717	715	701	692
Tennessee	838	864	874	884	900	892	873	877
Alabama	812	821	873	832	805	783	764	759
Mississippi	563	579	580	582	534	526	513	512
West South Central	4,050	4,298	4,433	4,626	4,772	4,652	4,676	4,712
Arkansas	436	448	451	453	463	461	454	457
Louisiana	760	786	821	865	842	846	841	847
Oklahoma	563	600	598	604	627	607	596	595
Texas	2,291	2,464	2,563	2,704	2,840	2,738	2,785	2,813
Western Region	6,830	7,425	7,794	8,184	8,341	8,263	8,180	8,192
Mountain	1,775	1,911	1,981	2,065	2,149	2,233	2,227	2,244
Montana	157	165	168	173	177	180	172	172
Idaho	167	173	175	179	182	185	188	197
Wyoming	83	88	85	86	87	86	87	88
Colorado	438	476	499	524	550	574	568	569
New Mexico	239	260	271	273	281	285	282	275
Arizona	353	366	383	411	440	485	487	493
Utah	258	283	292	301	304	306	306	310
Nevada	80	100	108	118	128	132	137	140
Pacific	5,055	5,514	5,813	6,119	6,192	6,030	5,953	5,948
Washington	685	719	753	804	818	791	785	785
Oregon	413	441	474	490	480	471	477	478
California	3,755	4,140	4,358	4,582	4,633	4,501	4,427	4,420
Alaska	50	56	62	71	80	85	87	89
Hawaii	152	158	166	172	181	182	177	176
Outlying areas	**634**	**663**	**701**	**711**	**734**	**780**	**786**	**771**
American Samoa	6	7	8	8	9	8	10	10
Canal Zone	13	13	13	14	13	13	11	11
Guam	15	16	18	21	25	27	28	29
Puerto Rico	592	618	651	668	687	711	713	697
Virgin Islands	8	9	10	–	–	21	23	24

NOTE. – Bars shaded to peak year of public school enrollment.
– Details may not add to totals because of rounding.

TABLE 80

Full-time enrollment in public elementary and secondary day schools: Fall 1965 and Fall 1975 7

	1965			1975		
	Fall Enrollment	Percentage Distribution	Rank Order	Fall Enrollment	Percentage Distribution	Rank Order
United States	42,143,304	100.00		44,838,490	100.00	
Alabama	831,201	1.97	18	759,146	1.69	22
Alaska	59,727	.14	51	89,295	.20	50
Arizona	373,659	.89	34	497,993	1.11	30
Arkansas	451,231	1.07	31	456,703	1.02	32
California	4,262,000	10.11	1	4,419,571	9.86	1
Colorado	486,784	1.16	30	569,128	1.27	28
Connecticut	574,798	1.36	28	652,449	1.46	24
Delaware	108,357	.26	47	127,476	.28	48
District of Columbia	144,016	.34	45	129,969	.29	47
Florida	1,220,581	2.90	9	1,551,478	3.46	8
Georgia	1,055,086	2.50	12	1,090,292	2.43	14
Hawaii	162,200	.38	42	176,430	.39	40
Idaho	173,696	.41	39	196,416	.44	39
Illinois	2,087,889	4.95	6	2,269,892	5.06	5
Indiana	1,124,724	2.67	11	1,226,206	2.73	10
Iowa	623,358	1.48	25	612,111	1.37	26
Kansas	506,958	1.20	29	448,064	1.00	33
Kentucky	665,046	1.58	23	691,512	1.54	23
Louisiana	802,392	1.90	20	847,302	1.89	20
Maine	222,306	.53	38	250,931	.56	38
Maryland	762,647	1.81	21	880,927	1.96	17
Massachusetts	1,020,500	2.42	13	1,198,410	2.67	11
Michigan	1,975,000	4.69	7	2,073,298	4.62	7
Minnesota	808,207	1.92	19	879,944	1.96	18
Mississippi	584,629	1.39	26	512,407	1.14	29
Missouri	964,351	2.29	15	965,362	2.15	15
Montana	166,765	.40	40	171,788	.38	43
Nebraska	318,746	.76	35	315,668	.70	35
Nevada	105,932	.25	48	139,745	.31	45
New Hampshire	128,857	.31	46	174,597	.39	42
New Jersey	1,286,000	3.05	8	1,458,000	3.25	9
New Mexico	267,700	.64	37	276,612	.61	37
New York	3,190,845	7.57	2	3,401,214	7.59	2
North Carolina	1,181,558	2.80	10	1,184,995	2.64	12
North Dakota	148,871	.35	44	131,132	.29	46
Ohio	2,270,108	5.39	4	2,292,647	5.11	4
Oklahoma	584,106	1.39	27	594,816	1.33	27
Oregon	448,527	1.06	32	447,559	1.00	31
Pennsylvania	2,189,829	5.20	5	2,246,218	5.01	6
Rhode Island	154,581	.37	43	176,317	.39	41
South Carolina	637,990	1.51	24	629,720	1.40	25
South Dakota	165,635	.39	41	151,217	.34	44
Tennessee	871,998	2.07	16	876,924	1.96	19
Texas	2,517,342	5.97	3	2,812,884	6.27	3
Utah	286,404	.68	36	309,708	.69	36
Vermont	84,254	.20	50	104,872	.23	49
Virginia	986,123	2.34	14	1,103,460	2.46	13
Washington	723,398	1.72	22	785,449	1.75	21
West Virginia	428,543	1.02	33	404,119	.90	34
Wisconsin	859,101	2.04	17	964,219	2.15	16
Wyoming	86,308	.20	49	88,184	.20	51

SOURCE: Department of Health, Education, and Welfare, National Center for Education Statistics, Statistics of Public Schools, Fall 1965 and Statistics of Public Elementary and Secondary Day Schools, Fall 1975.

Table 81

Full-time enrollment in public elementary and secondary day schools in major cities: Fall 1965 and Fall 1975[8]

	Fall 1965			Fall 1975		
	Enrollment	Percent of total United States	Rank Order	Rank Order	Enrollment	Percent of total United States
LARGE CITIES:						
Baltimore, Md.......	191,008	.45	7	7	166,370	.37
Boston, Mass........	93,104	.22	15	14	85,070	.19
Chicago, Ill........	542,581	1.29	3	3	526,716	1.17
Cleveland, Ohio.....	152,852	.36	8	10	128,127	.29
Dallas, Texas.......	150,293	.36	9	8	151,187	.34
Detroit, Mich.......	295,177	.70	4	5	248,007	.55
Houston, Texas.....	228,247	.54	6	6	208,681	.47
Los Angeles, Calif.	620,272	1.47	2	2	608,998	1.36
Milwaukee, Wis.....	122,377	.29	11	11	115,676	.26
New Orleans, La.....	106,164	.25	13	12	94,079	.21
New York, N.Y.......	1,075,777	2.55	1	1	1,085,807	2.42
Philadelphia, Pa....	276,367	.66	5	4	265,674	.59
St. Louis, Mo.......	114,884	.27	12	13	87,854	.20
San Francisco, Calif	93,203	.22	14	15	70,133	.16
Washington, D.C.....	144,018	.34	10	9	129,969	.29

SOURCE: Department of Health, Education, and Welfare, National Center for Education Statistics, Statistics of Public Schools, Fall 1965 and Statistics of Public Elementary and Secondary Day Schools, Fall 1975.

FIGURE 81

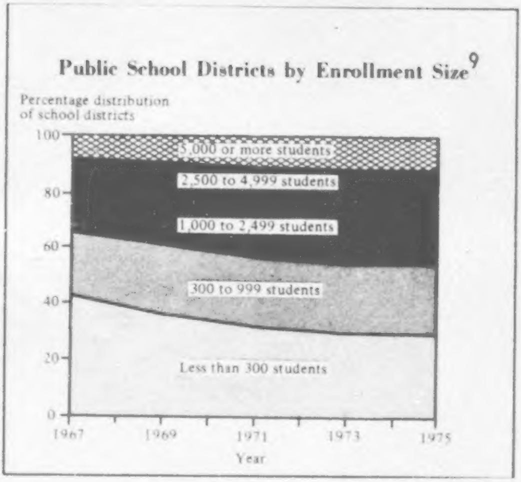


FIGURE 82

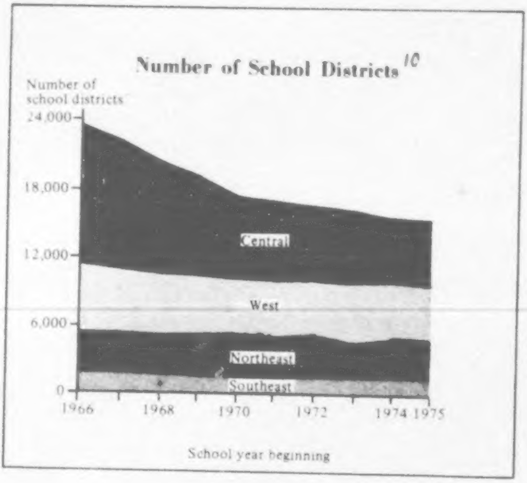


Table 82

Distributions of operating local public school systems and numbers pupils, by size of system: United States, Fall 1967 to Fall 1975[11]

Enrollment Size	1967	1969	1971	1973	1975
Total operating systems	20,255	18,655	16,771	16,338	16,006
25,000 or more students	170	180	184	186	187
10,000 to 24,999 students	529	538	558	562	555
5,000 to 9,999 students	1,083	1,097	1,110	1,146	1,126
2,500 to 4,999 students	1,941	2,026	2,026	2,025	2,050
1,000 to 2,499 students	3,500	3,478	3,506	3,482	3,467
300 to 999 students	4,639	4,446	4,291	4,214	4,157
Less than 300 students	8,393	6,890	5,096	4,723	4,464
			Percentage distribution		
Total operating systems	100.0	100.0	100.0	100.0	100.0
25,000 or more students	0.8	1.0	1.1	1.1	1.2
10,000 to 24,999 students	2.6	2.9	3.3	3.4	3.5
5,000 to 9,999 students	5.4	5.9	6.6	7.0	7.0
2,500 to 4,999 students	9.6	10.9	12.1	12.4	12.8
1,000 to 2,499 students	17.3	18.6	20.9	21.3	21.7
300 to 999 students	23.0	23.8	25.6	25.8	26.0
Less than 300 students	41.4	36.9	30.4	28.9	27.9
Enrollment in operating systems, by systems, size	43,626,594	44,494,621	45,115,164	44,984,957	44,231,874
25,000 or more students	12,539,348	12,992,936	13,247,458	12,939,014	12,533,059
10,000 to 24,999 students	7,744,636	7,887,050	8,198,133	8,267,441	8,070,851
5,000 to 9,999 students	7,450,234	7,631,784	7,725,266	7,952,960	7,820,441
2,500 to 4,999 students	6,752,568	7,065,765	7,096,504	7,070,177	7,153,477
1,000 to 2,499 students	5,677,585	5,649,923	5,741,499	5,726,969	5,682,631
300 to 999 students	2,727,561	2,619,232	2,543,350	2,497,693	2,458,709
Less than 300 students	734,662	647,931	562,954	530,703	512,706
			Percentage distribution		
Enrollment in operating systems, by systems, size	100.0	100.0	100.0	100.0	100.0
25,000 or more students	28.7	29.2	29.4	28.8	27.3
10,000 to 24,999 students	17.7	17.7	18.2	18.4	18.2
5,000 to 9,999 students	17.1	17.2	17.1	17.7	17.7
2,500 to 4,999 students	15.5	15.9	15.7	15.7	16.2
1,000 to 2,499 students	13.0	12.7	12.7	12.7	12.8
300 to 999 students	6.3	5.8	5.6	5.6	5.6
Less than 300 students	1.7	1.5	1.2	1.2	1.2

C. Absentee Rates

An interesting, quantitative measure of student disaffection with school systems is indicated by the relationship between average daily membership enrollment and absentee rates for states and large cities.

The average absentee rate for all states in the United States was 6.9 in 1968-70, and 6.1 in 1975-76. For the fifteen largest cities, the average daily absentee rate was 7.1 in 1969-70 and 10.2 for 1975-76.

This may be a primary measure of the failure of those systems to meet the perceived needs of a large portion of urban students. Whether it is the perceptions of the students, or the performance of the system which should be the primary focus of change is an appropriate subject for study.

D. Dropout Rates

The trend since at least 1967 has been for white drop out rates to remain relatively constant at about 11 percent. The dropout rates for Black students have dropped and is approaching the rate for whites. Clearly this a positive social indicator. However, attention should be given to the possible implications of a relatively constant level of dropout for whites. One hypothesis having significant policy implications and worth exploring is that there is a body of students perhaps around 10 or 11 percent who are not cut out in terms of their aptitudes and ability for the kinds of implicit goals, and functions, of the school system. Consequently, attempts to directly reduce dropout rates may themselves not be in the public interest and not in the interest of the dropout students. Alternative forms of education may be appropriate. This question becomes increasingly pressing when one sees the movement toward an information society making credentials as well as the ability to work with written symbols a key part of our society and its upward economic mobility. To force fit all into that mold may be as serious an error as to fail to fit those who are able.

A recent General Accounting Office report to the Congress raises very salient criticism about the planning, the goals, the evaluation and effectiveness of bilingual education.[12]

Figure 83

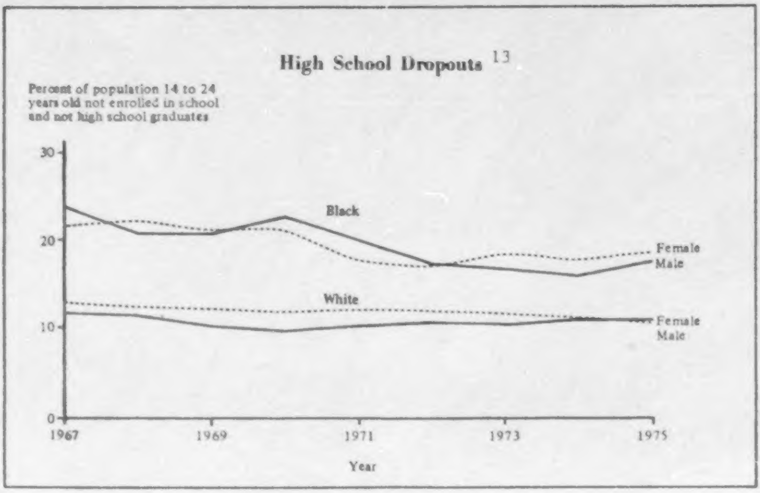

High School Dropouts 13
Percent of population 14 to 24 years old not enrolled in school and not high school graduates
30
20
10
0
Black
Female
Male
White
Female
Male
1967
1969
1971
1973
1975
Year

TABLE 83

Enrollment by Average daily membership and Absentee rate, by State and Large city: United States, 1969-70 and 1975-76 34

(ADM in thousands)

	1969-70		1975-76	
	Estimated ADM	Absentee Rate	Estimated ADM	Absentee Rate
Total	44,710	5.39	44,100	6.18
Alabama	814	4.24	752	4.78
Alaska	78	6.07	89	5.42
Arizona	409	[illegible]	489	6.00
Arkansas	440	5.10	434	5.00
California	4,540	7.21	4,351	7.48
Colorado	533	6.10	551	4.28
Connecticut	640	7.03	651	7.16
Delaware	129	8.00	126	7.16
District of Columbia	134	10.01	128	8.93
Florida	1,402	6.35	1,555	6.00
Georgia	1,107	7.09	1,065	7.12
Hawaii	179	6.19	177	8.30
Idaho	-	-	-	-
Illinois	2,201	5.11	2,231	8.95
Indiana	-	-	1,145	5.79
Iowa	650	3.96	598	5.98
Kansas	-	-	448	6.04
Kentucky	691	5.89	690	6.96
Louisiana	875	7.20	826	8.26
Maine	234	5.56	243	8.38
Maryland	884	8.20	875	9.48
Massachusetts	1,110	6.3	-	-
Michigan	-	-	-	-
Minnesota	911	4.86	880	3.83
Mississippi	573	5.83	507	5.50
Missouri	-	-	-	-
Montana	172	5.36	172	4.95
Nebraska	330	5.70	310	4.92
Nevada	123	6.50	138	7.98
New Hampshire	149	5.66	172	5.99
New Jersey	1,450	6.90	1,542	9.22
New Mexico	276	3.91	275	4.84
New York	3,465	7.00	3,373	9.98
North Carolina	1,175	5.57	1,170	5.00
North Dakota	146	3.6	137	3.31
Ohio	2,417	6.35	2,254	7.00
Oklahoma	583	4.14	585	5.13
Oregon	464	5.86	457	6.80
Pennsylvania	2,305	5.86	2,227	7.61
Rhode Island	174	7.26	168	5.26
South Carolina	641	5.91	628	6.55
South Dakota	166	4.52	150	4.02
Tennessee	883	4.74	878	5.54
Texas	2,595	6.64	2,730	7.16
Utah	301	4.10	308	5.87
Vermont	103	5.00	104	4.00
Virginia	1,057	5.44	1,087	7.18
Washington	-	-	778	6.47
West Virginia	399	5.21	388	5.21
Wisconsin	926	4.76	918	6.19
Wyoming	86	4.65	82	3.72
Guam	22	5.97	28	6.30
Puerto Rico	-	-	716	9.81
Virgin Islands	No report		25	6.61

Table 84

Average daily membership and absentee rates in large city schools: United States
1969-70 and 1975-76[15]

(ADM in thousands)

	1969-1970		1975-1976	
	ADM	Absentee Rate	ADM	Absentee Rate
LARGE CITIES:				
Baltimore, Md........	188	6.90	166	17.02
Boston, Mass.........	100	1.00	–	–
Chicago, Ill.........	549	10.39	526	15.59
Cleveland, Ohio......	147	7.18	122	10.32
Dallas, Texas........	168	10.40	138	9.67
Detroit, Mich........	298	8.00	–	–
Houston, Texas.......	246	7.24	203	5.83
Los Angeles, Calif 1/	644	1.52	594	1.48
Milwaukee, Wis.......	123	6.68	107	11.11
New Orleans, La......	110	11.38	90	13.97
New York, N.Y........	1,123	9.63	1,067	16.77
Philadelphia, Pa.....	287	14.00	263	15.00
St. Louis, Mo........	100	9.50	85	10.49
San Francisco, Calif 1/	91	1.52	68	1.48
Washington, D.C.....	154	10.01	128	8.93

1/ California reports excused absences as attendance.

SOURCE: National Center for Education Statistics, Department of Health, Education, and Welfare, Statistics of Public Elementary and Secondary Day Schools, Fall 1975 and Statistics of Public Schools, Fall 1969.

X. FLIGHT TO THE PRIVATE SCHOOL

At the zenith of private school attendance in 1965-66, some 6,305,000 elementary and secondary students were enrolled in non-public institutions. This fell by a million to 5,330,000 in 1970. On a percentage basis, non-public schools share a drop from 13.6 in 1959-60 to 11.4 percent in 1969-70.

Since the Catholic school system now enrolls some 76 percent of all private school students, a recent study by Erickson, Nault and Cooper for the NIE, points out that whatever happens to that school system easily obscure the more subtle trends.[1] Other sectarian school systems fall in the range from a fraction of one percent to 3.7 percent (for the Missouri Synod, a Lutheran school system) of all non-public schools. The schools affiliated with the National Associated of Independent schools, largely non-sectarian, enrolled 6.2 percent or 277,406 pupils (Table 85) in 1975-76.

If one partitions out, and examines separately the percent change in non-public school enrollment by Roman Catholic and non-Roman Catholic schools with 1965-66 as the base line, it becomes strikingly clear that non-public, non-Catholic enrollment has increased some 40 percent (Figure 84).

A. Implications of the Movement to Private Schools

While the data described below are not compelling, they are certainly suggestive that in school systems with substantial percentages of Black students, that is roughly above 30 percent, there is a tendency on the part of whites to withdraw from the public school system. Since private schooling costs money, this effect is most clearly seen in those families with incomes above $15,000, although the trend is also clear in families earning between $10,000 and $15,000. Since families in the higher income group have the greatest number of options open to them, their behavior is important on two grounds. First, it may be a model for the behavior of less prosperous families whose options may not include enrollment in private schools, but rather, movement to other neighborhoods, suburban communities, or other regions. Second, the removal of a substantial portion of the prosperous middle class from the school system, could have a direct effect of subverting the democratic objectives of school systems through egalitarian participation. It may have the indirect effect of producing further resistance to appropriate funding of services for already troubled students in already troubled systems. The net effect could be not just ghetto schools but ghetto school systems.

B. Catholic Schools

Before returning to the expansion in non-Catholic private school enrollment, it would be useful to review Erickson's conclusions on why Catholic schools have gone into numerical decline.[2] These include:

- o Massive fiscal shock since the contributed service of nuns, priests, and brothers was drastically diminished and the cost of lay teachers increased three-or four-fold. No other non-public

TABLE 85

Proportion of total U.S. nonpublic school enrollment accounted for by major nonpublic school groups, 1975-76[3]

Nonpublic School Group	Enrollment 1975-76	Percentage of Total
1. Roman Catholic Schools	3,415,000	75.9
2. Lutheran Schools		
a. Missouri Synod	165,604	3.7
b. American Lutheran	16,121	0.4
c. Wisconsin Synod	31,183	0.7
3. Seventh Day Adventist Schools	75,722[a]	1.7
4. Calvinist Schools (National Union of Christian Schools)	48,585	1.1
5. Evangelical Schools		
a. National Association of Christian Schools	23,185	0.5
b. Western Association of Christian Schools	63,131	1.4
c. National Christian School Education Association	38,175	0.8
d. Assembly of God Christian Day Schools	21,921	0.5
e. American Association of Christian Schools	94,722	2.1
6. Jewish Day Schools		
a. National Society for Hebrew Day Schools (Orthodox)	82,200	1.8
b. Solomon Schechter Day Schools (Conservative)	7,965	0.2
c. Reform Jewish	373	0.01
7. National Association of Independent Schools	277,406	6.2
8. Episcopal		
a. Parish Day Schools	5,536	0.1
b. Nonparish Schools	71,020	1.6
9. Friends (Quaker) Schools	13,801	0.3
10. Military Schools	13,600	0.3
11. Greek Orthodox Schools	5,009	0.1
12. Mennonite Schools	8,079	0.2
13. Nonpublic Alternative (Free) Schools	23,498	0.5
TOTAL Enrollments Reported	4,501,836	100.11[b]

school group faced the massive city to suburb migration as the Catholics have recently undergone.

- The church leaders have not replaced the old city with new suburban schools, hence a student can hardly attend a non-existent school.
- There is a rapid shift in the philosophical outlook of Catholics since the Second Vatican Council.

Erickson et. al. conclude that disaffection with recent developments in public schools have reached the stage where it is difficult to escape the conclusion that "...public disenchantment with public schools is reaching serious proportions, particularly in some parts of the country." They earmark the deep south, Florida and the Southwest, where public disfavor has been most clearly visible.

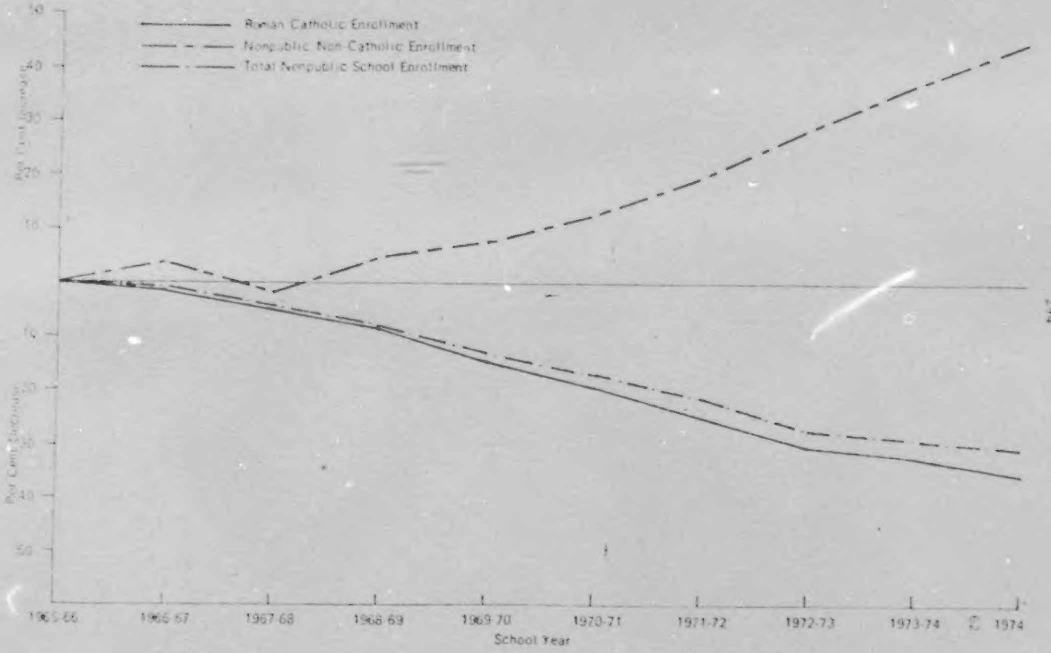
Erickson found that a group of national leaders attributed the revived interest in non-public schools to public alienation with public schools, including such matters as drug abuse, loose discipline, sex education, controversial books, and lack of academic rigor.

C. Private School Trends

Turning now to more recent trend data, the total enrollment in public and private schools may be seen in Figure 85.

FIGURE 84

PER CENT CHANGE IN NONPUBLIC SCHOOL ENROLLMENT BY ROMAN CATHOLIC AND NON-ROMAN CATHOLIC ENROLLMENT BASED ON 1965-66 SCHOOL YEAR[4]



The relationship of family income to the public/private school choice clearly shows an increase in those with incomes of $10,000 to $15,000 per year and in those incomes over $15,000. Insofar as private schools cost money, it is quite plausible that those with the money are the ones to first exercise that option (Figure 86).

The cost of educating a child in a private school is roughly equivalent to that of operating the family car, on an annual basis.

In a regional examination of private elementary schools, the same trend is visible, but even more striking is the extremely steep money gradient in the Southeast (Figure 87). The movement to private schools is by no means totally white. In the Northeast and the Southeast, the Black enrollment in private schools peaked at about ten and three percent, respectively, in 1972. A significant percentage of Blacks, however, are enrolling in private schools. It is not surprising, however, with the general depression in Black incomes as compared to whites incomes, that fewer Blacks would enroll (Figure 88).

When one turns to secondary school students, an even more significant effect can be seen between 1970 and 1975 (Figure 89). Those families with the money are moving to private schools (see Figure 90). The same general trends hold by region and race (Figures 91, 92 and 93).

FIGURE 85

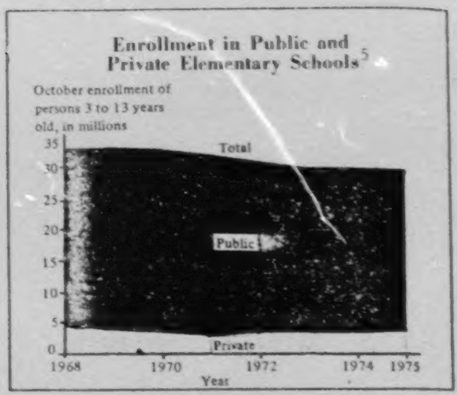


FIGURE 86

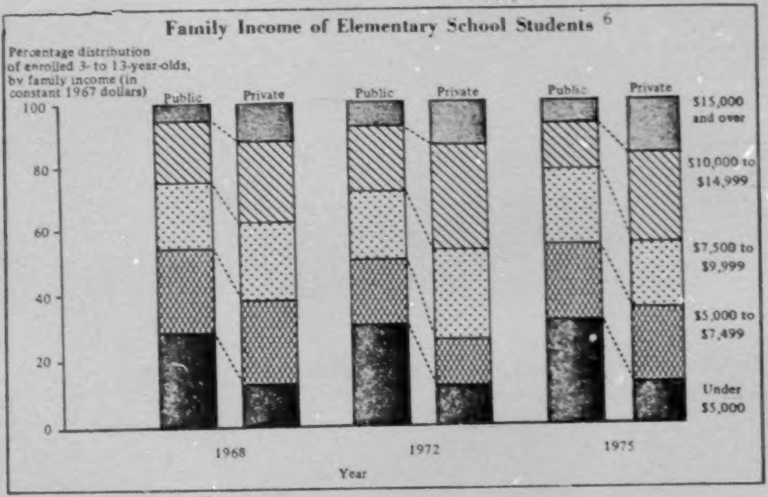
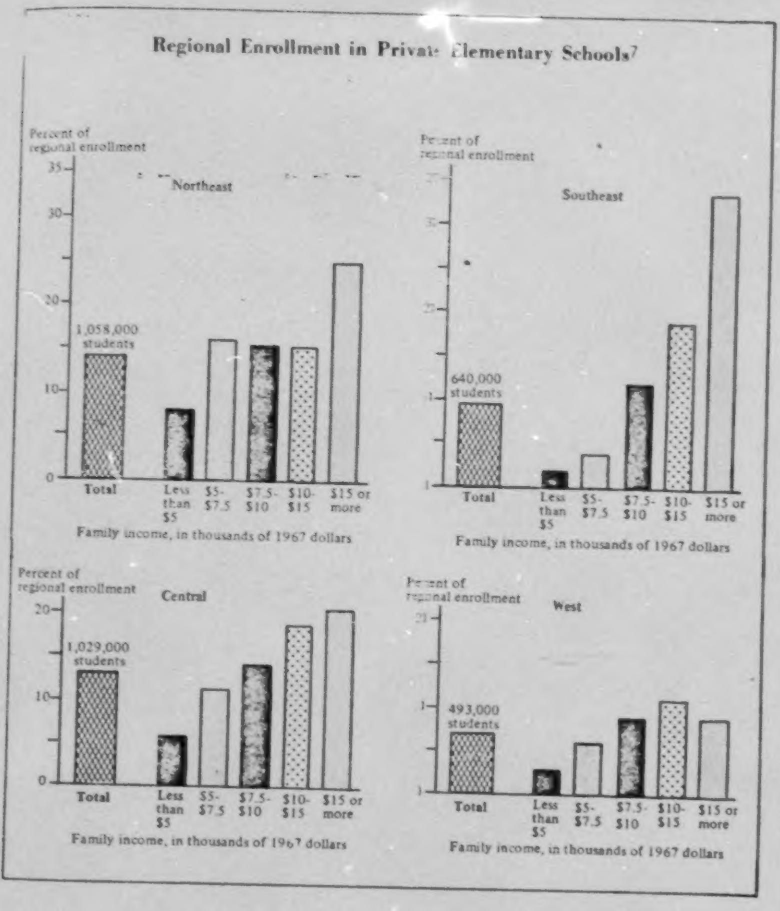


FIGURE 87



Regional Enrollment in Private Elementary Schools[7]
Percent of regional enrollment
Northeast
35
30
20
10
0
1,058,000 students
Total
Less than $5
$5-$7.5
$7.5-$10
$10-$15
$15 or more
Family income, in thousands of 1967 dollars
Percent of regional enrollment
Southeast
640,000 students
Central
20
10
0
1,029,000 students
West
493,000 students

FIGURE 88

Enrollment in Private Secondary Schools, by Region and Race [8]

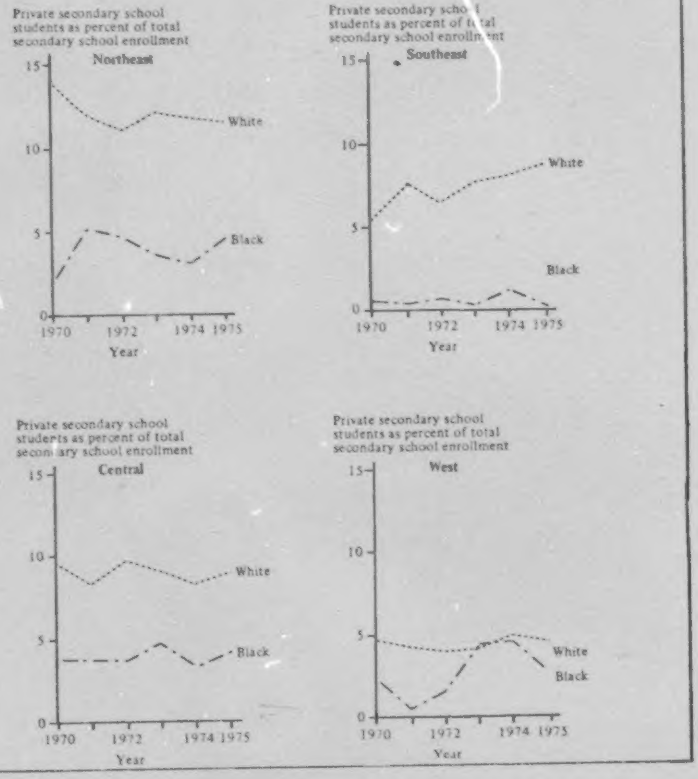


FIGURE 89

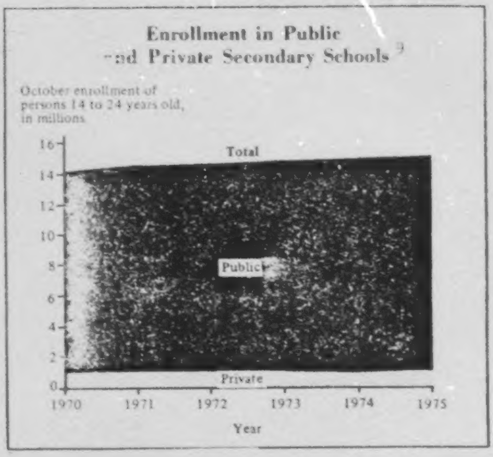
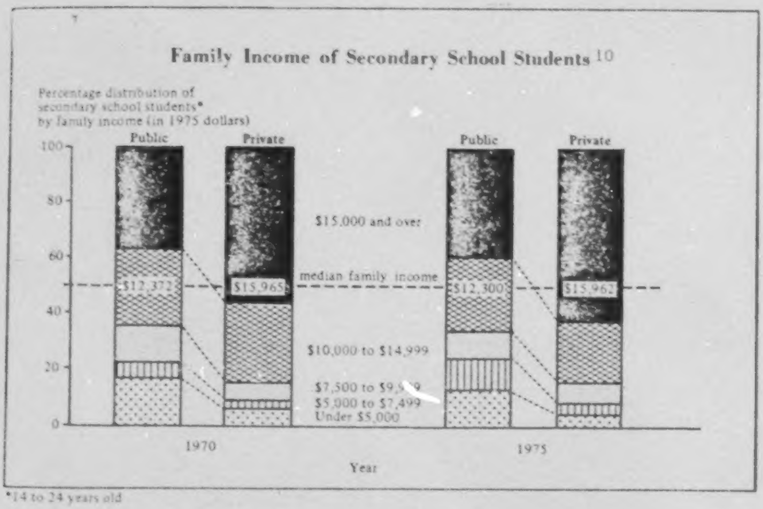
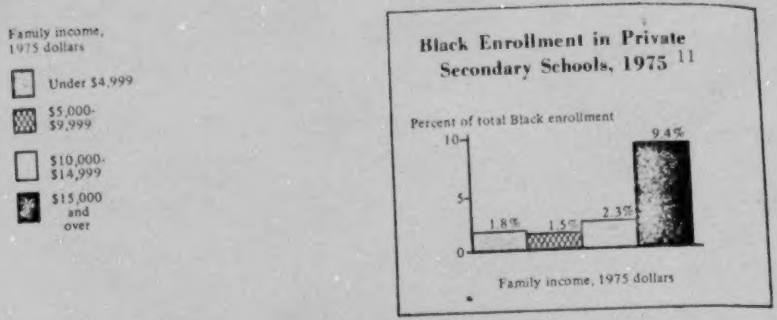


FIGURE 90



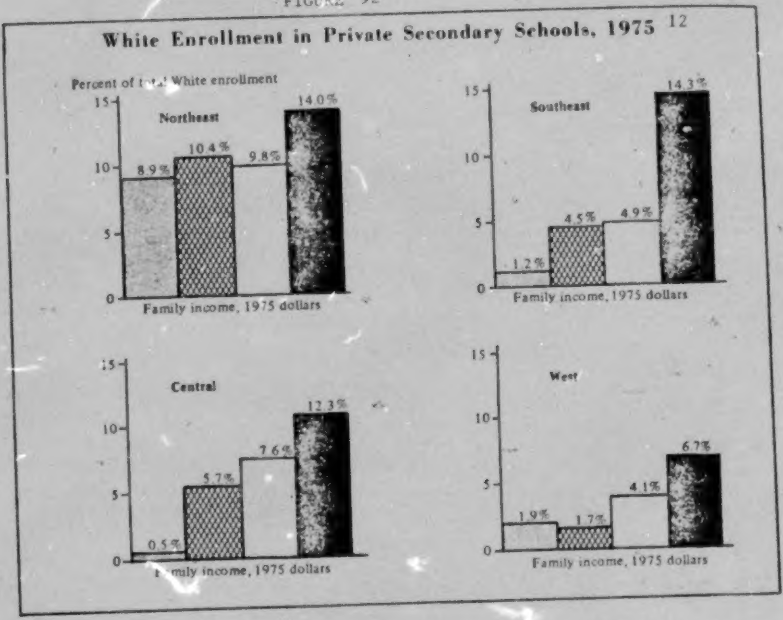
*14 to 24 years old

FIGURE 91



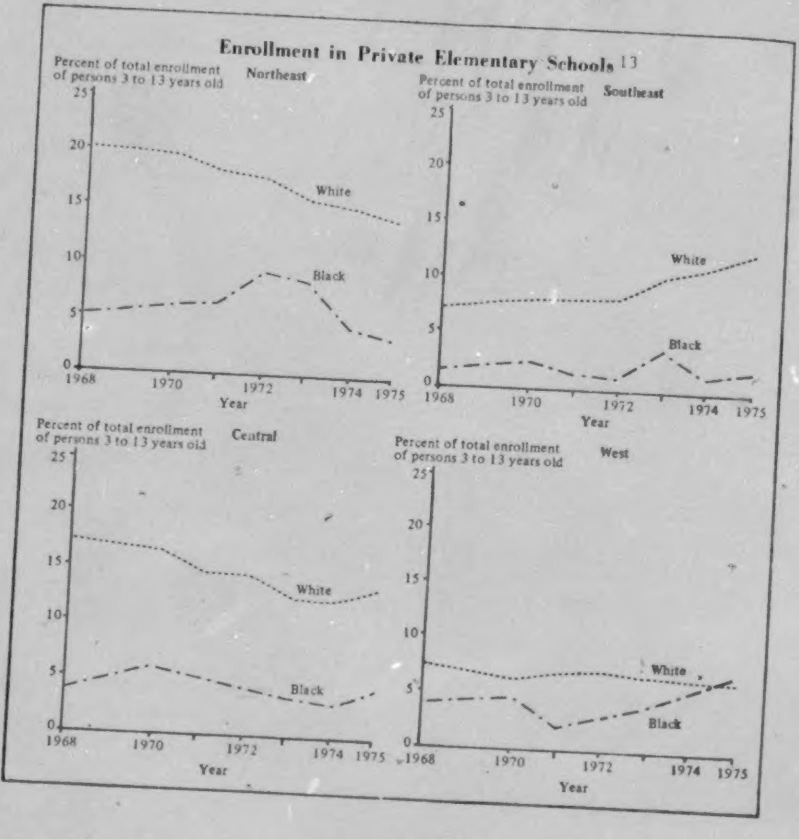
Black Enrollment in Private Secondary Schools, 1975 [11]

FIGURE 92



White Enrollment in Private Secondary Schools, 1975 [12]

FIGURE 93


Enrollment in Private Elementary Schools 13
Percent of total enrollment of persons 3 to 13 years old
Northeast
25
20
15
10
5
0
White
Black
1968
1970
1972
1974
1975
Year
Southeast
White
Black
Central
White
Black
West
White
Black

The Florida Study

A detailed study of compliance and rejection of compliance with segregation in seven Florida districts has been conducted by a team from Cleveland State University and Florida-Atlantic University.[14]

Table 86 shows a comparison of enrollments in the fall of 1970 and the fall of 1973 for the seven districts and the percent change of enrollment of public and private schools. There was an increase of 34 percent in private school enrollment. The beneficiaries of the private school growth were Protestants and other non-Catholics sectarian schools (111 percent increase) and non-sectarian schools (68 percent increase). Catholic parochial enrollments declined.

In looking at the details, the data show that the percent of withdrawal of the child from school, increase with family incomes. Of families earning less than $12,000 a year, 2½ percent withdrew their child; for those earning $12,000 to $21,000, 5.4 percent withdrew. When these are broken down according to the level of education and income (Table 87), the rate of withdrawal of the child is seen to increase both with the level of the education of the parent and with income. Those families with more than high school education and earning more than $21,000 withdrew at the rate of 13.4 percent.

The United States Commission on Civil Rights conducted a survey on desegregation. The surveyed school superintendents, representing

TABLE 86

TOTAL PUBLIC AND PRIVATE SCHOOL ENROLLMENTS, K-12,
IN STUDY DISTRICTS AND PERCENT CHANGE, 1970-73[15]
FLORIDA

	FALL, 1970		FALL, 1973		% CHANGE 1970 - 1973	
	PUBLIC	PRIVATE	PUBLIC	PRIVATE	PUBLIC	PRIVATE
Dade	259,452	33,138	263,932	44,306	+ 1.7	+33.7
Duval	130,680	8,777	121,118	14,179	- 7.3	+61.5
Escambia	51,192	6,205	51,815	6,377	+ 1.2	+ 2.8
Lee	23,350	1,044	30,018	1,168	+28.4	+11.9
Leon	22,376	1,482	22,816	2,766	+ 2.0	+86.6
Manatee	18,585	744	21,609	840	+16.3	+12.9
Palm Beach	74,380	7,195	77,542	9,081	+ 4.3	+26.2
TOTALS	580,041	58,585	588,920	78,717	+ 1.5	+34.4

TABLE 87

REMOVAL OF CHILDREN FROM PUBLIC SCHOOL SYSTEMS BY EDUCATION AND INCOME[16]

	EDUCATION - GRADES COMPLETED		
ANNUAL FAMILY INCOME	1-7	8-12	13+
$ 11,999 OR LESS	3.4	2.3	4.3
12,000-20,999	2.1	5.0	6.8
21,000+	6.6	4.1	13.4

1292 school districts which constitute 47 percent of all school districts in the country having at least five percent minority enrollment, and the student enrollment of 1500 or more. These data were combined with data from the Office of Civil Rights for the Department of Health, Education and Welfare. That report concludes: 17

> The reduction in the percentage of white students does appear to be related to the proportion of Black students, but this is irrespective of whether desegregation has taken place. In the 4 years 1968-72, districts that had greater than 40 percent Black enrollments in 1968 experienced a reduction of 15 percentage points in the proportion of white students, a much greater drop than in districts with lower proportions of Black enrollment.

It should be noted that of the 874 districts from which data were available, the reduction in proportion to whites over four years was 6 percent (see Tables 88 and 89).

TABLE 87

NUMBER OF DISTRICTS AND THEIR AVERAGE REDUCTION IN PROPORTION WHITE, 1968-72, AND BY PROPORTION BLACK IN 1968.[18]

PROPORTION BLACK (1968)		TOTAL DISTRICTS
0-20% BLACK	AVERAGE REDUCTION	4%
	NUMBER OF DISTRICTS	538
20-40% BLACK	AVERAGE REDUCTION	3%
	NUMBER OF DISTRICTS	178
40-100% BLACK	AVERAGE REDUCTION	15%
	NUMBER OF DISTRICTS	160
ALL DISTRICTS	AVERAGE REDUCTION	6%
	NUMBER OF DISTRICTS	874

TABLE 89

NUMBER OF DISTRICTSAND THEIR AVERAGE REDUCTION IN PROPORTION WHITE 1968-72.[19]

Community Size		Total
METROPOLITAN		
50,000+	AVERAGE REDUCTION	10 %
	NUMBER OF DISTRICTS	146
10,000-50,000 IN SMSA	AVERAGE REDUCTION	6 %
	NUMBER OF DISTRICTS	136
Suburban	AVERAGE REDUCTION	3 %
	NUMBER OF DISTRICTS	127
NONMETROPOLITAN		
10,000-50,000 Non-SMSA	AVERAGE REDUCTION	5 %
	NUMBER OF DISTRICTS	175
Rural	AVERAGE REDUCTION	5 %
	NUMBER OF DISTRICTS	283
All Districts	AVERAGE REDUCTION	6 %
	NUMBER OF DISTRICTS	867

XI. DECLINE IN THE AGE OF ONSET OF PUBERTY[1]

The age of menarche, that is, the age of first menstruation, is a convenient biological marker for the onset of puberty. As a long-term trend in western Europe and the United States, going back to at least 1830, the age of menarche has dropped four months per decade. In general, the age of menarche in the United States preceeds that of Europeans by about six months.[2]

This increasingly early physical maturation applies to boys as well, although there is no convenient biological marker. The social significance of earlier physical maturation was recognized decades ago and is partly reflected in the concept of the junior high school. Unfortunately, the junior high school never developed an effective sense of its own educational function as a way station for those too mature for elementary school but too socially immature for a high school environment.

Other social forces moving into play however, make attention to the educational implications of this trend more urgent. The only group in the United States now undergoing significant expansion in birth rates are females under age 15.[3]

- o In 1975, of the 3,144,198 live births, 12,642 were born to women under 15 years of age.

- 220,270 babies were born to women 15 - 17 years of age age.

Since maximum ability to conceive is not immediately developed at menarche, these birth rates suggest a much higher level of sexual activity in this age group.

Of these children born to the 15 and under mothers, 5,073 were born to white mothers and 7,315 to Black mothers.

This pattern of early adolescent conception marks an 8 percent increase in the rate of births for girls 10 to 14 years old. The births accounted for only 0.4 percent of all births.

Educational implications of this situation follow in several different directions: Young motherhood is associated with a variety of congenital defects in the child. Young motherhood also interfers with the ability to continue education. Young motherhood carries a higher risk of having and raising a defective child. The negative consequences result for the child-mother and the child may be self-reinforcing and accrue directly to the school system.

A. Some Effects of Very Early Childbearing

The disastrous effects of childbearing by very young mothers is brought out in a study of 5,000 pregnancies conducted over the past 15 years by Dr. Janet Hardy, Professor of Pediatrics and Professor of Public Health Administration of the John Hopkins University. Among the infants studied, 550 were born to girls 16 years of age or younger. The children are all now 10 to 16 years old. Some of the indicator outcomes associated with pregnancy complications or later developments are shown below:[4]

Item	Percent Occurence
Prior Pregnancy	10
Toxemia of Pregancy	37
Perinatal death	4
Prematurity (birth weight below 5½ pounds)	22
Neurological status other than normal at 12 months	10
IQ of the child at 4 Years	
70 and below	11 (Gen. pop. 2.6%)
110 and above	5 (Gen. pop. 25%)
IQ of the child at 7 years	
70 and below	5.3(Gen. pop. 2.2%)
110 and above	2.8 (Gen. pop. 25%)

B. Sexual Behavior of Teenagers

In a systematic study comparing sexual experience of young unmarried women in 1976 and 1971, Zelnick and Kantner of Johns Hopkins found a 30 percent increase in sexual activity of young unmarried women, so that by age 19, 55 percent of young unmarried women have had sexual intercourse.

Figure 94 shows the distribution of never married females, age 15-19, who have had intercourse. Data is by age, during the years 1971 and 1976.

In Table 90 are displayed the substantial differences between whites and Blacks in this regard. Fourteen percent of white females have had sexual intercourse by age 15 whereas 38 percent of Blacks have. Today, by age 18, 44 percent of whites and 74 percent of Blacks have had sexual intercourse.

From Soransen's study (1973) of adolescent non-virgins there may be some curriculum implications in sex education as well as some implication for extension education of parents (See Table 91).

C. Teenage Births are Unwanted or Unplanned

A study in New York City covering the years 1963-74 shows that 80 percent of first births to women from 15 to 19 years old were not planned; 67 percent of them occurred among females who were not high school graduates, 61 percent were not married (see Figure 95).

TABLE 90

Percent of never-married women aged 15-19 who have ever had intercourse, by age and race, 1976 and 1971

Age	Study year and race												
	1976					1971					% increase 1971-1976		
	All	White		Black		All	White		Black		All	White	Black
		%	N	%	N		%	N	%	N			
15-19	**34.9**	**30.8**	**1,232**	**62.7**	**654**	**26.8**	**21.4**	**2,633**	**51.2**	**1,339**	**30.2**	**43.9**	**22.5**
15	18.0	13.8	276	38.4	133	13.8	10.9	642	30.5	344	30.4	26.6	25.9
16	25.4	22.6	301	52.6	135	21.2	16.9	662	46.2	320	19.8	33.7	13.9
17	40.9	36.1	277	68.4	139	26.6	21.8	646	58.8	296	53.8	65.6	16.3
18	45.2	43.6	220	74.1	143	36.8	32.3	396	62.7	228	22.8	35.0	18.2
19	55.2	48.7	158	83.6	104	46.8	39.4	287	76.2	151	17.9	23.6	9.7

Note: *In this and subsequent tables:* Base excludes those for whom no information was obtained on intercourse; this amounted in 1971 to 1.2 percent of the never-married blacks and 1.3 percent of the whites; and, in 1976, to 0.9 percent of the blacks and 0.7 percent of the whites. Percentages for whites and blacks are computed from unweighted data (Ns in tables); percentages for total sample are computed from weighted data and thus may sometimes appear to be inconsistent with figures by race. Figures for 1971 differ from earlier published reports because they exclude women living in group quarters. Except where indicated, the base excludes women who did not respond to the question analyzed in the table.

FIGURE 94

Percent of never-married women aged 15–19 who have ever had intercourse, by age, 1976 and 1971[6]

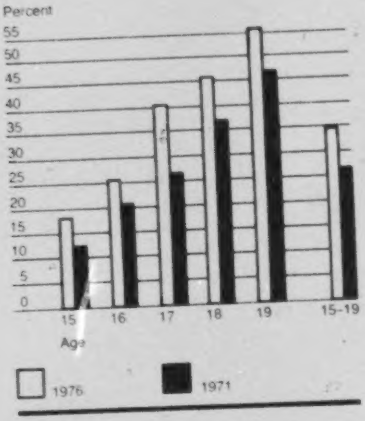


TABLE 91

Behavior and Attitudes of Adolescent Nonvirgins as Related to Sexual Responsibility, by Age and Experience[7]

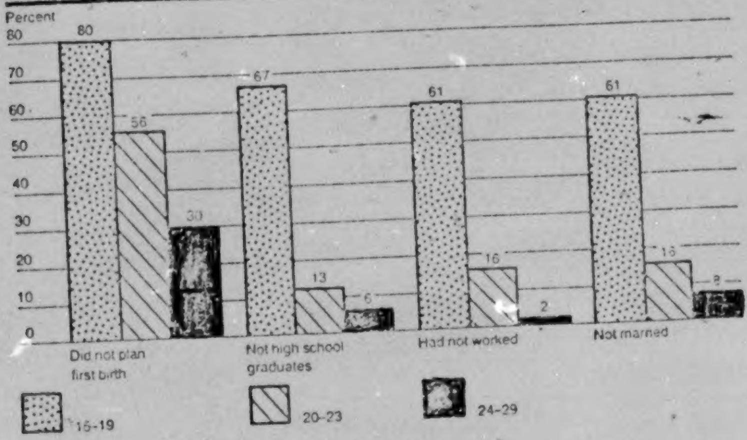
Attitude or behavior	By age			By experience	
	All	Ages 13-15	Ages 16-19	With current intercourse experience	With no current intercourse experience
Sometimes worry about becoming pregnant (451, 452)	70%	61%	72%	71%	66%
Used contraception first time (385)	19			29	3
Used contraception most recent time (507)				40 (13-15, 21%; 16-19, 46%)	
Do not know where to secure contraceptive information (501)	16	32	9		
Precaution taken in past month (481)				62	
Were trusted to luck in past month (503)				63	
Would have abortion if became pregnant (457, 458)	18	2	23	23	3
Would get married if became pregnant (458)[a]	31			31	30
Have used *pills* (386)	31	10	39		
Fear has prevented intercourse (476)	44			38	58
Contraception (except pill) too much trouble (308)	45	35	49		
Neither used contraception last time (507)	40	45	38		
Have never thought about getting pregnant in last month (505)				82	
Don't worry because abortion so available (330)	14	21	11		
Have been pregnant (479, 480)	23	11	28	28	7

Note. Figures in parentheses refer to tables.

[a] In 23 percent of the cases the young man said he would marry the young woman; in 46 percent of the cases he might marry her.

FIGURE 95

Percent of women aged 15–19, 20–23 and 24–29 at the birth of their first child, by birth planning and marital status, educational level and employment experience, New York City, 1973–1974



According to a 1968 report between 1/2 and 2/3 of all female dropouts from high school cited pregnancy and/or marriage as their principal reason for leaving school. While the policy of the Office of Education is that every pregnant adolescent has the right to continue her education, it is highly doubtful that this is an opportunity effectively pursued.

Frank F. Furstenberg, of the Center for Population Research, University of Pennsylvania, who has made an extensive study and published a book under the title Unplanned Parenthood: The Social Consequence of Teen-Age Childbearing, summarizes his observations:9

> In our investigation, we discovered a sharp and regular pattern of differences in the marital, childbearing, educational and occupational careers of adolescent mothers, as compared to their classmates. The young mothers consistently experienced greater difficulty in realizing life plans; gaping disparity existed between the goal they articulated in the first interview and their experience following delivery. In contrast, we found that the classmates expecially, those who do not become pregnant premaritally during the five years of study had a far better record of achieveing their immediate objectives in life. The early pregnancy created a distinct set of problems for the adolescent parent, it forced a redirection of her intended life course. In particular, we established a number of links connected to early childbearing, to complication in marriage, to disruption of schooling, to economic problems, and to some extent to problems in family size regulation and child rearing as well.

XII. SOME NON-DEMOGRAPHIC VARIABLES INTERACTING WITH DEMOGRAPHY

As noted in Table 2 of the introduction, a variety of non demographic factors have been identified as likely to have a primary interaction with demographic trends. This section presents some sketchy, but hopefully suggestive, information about two of these variables--energy and changes in the structure of occupations.

A. Energy

The permanent shift upward in the price of energy, most conspicuously seen in liquid and gas fuel prices, is likely to have direct and indirect effects on the elementary school system.

The direct effects may come in terms of:

- o Fuel costs for heating
- o Fuel costs for transportation and busing
- o Longer term effects on structure and design of buildings
- o A movement toward larger size school units, for the scale economies associated with larger buildings.

Indirect effects are likely to come about through:

- o The indirect increase in the cost of all goods, hence a reduction in discretionary income, that may effect parental expenditures in relation to school and their willingness to allocate funds to school.

- o Relocation in choice of residence may effect school district populations.
- o Private home owners, dual income families, upper middle class and high income families will have the greatest opportunities for savings and the most discretion in response to energy cost.

As Peter Morrison of the Rand Corporation has pointed out "...the complex calculus whereby families form residential location preferences may be modified by a heightened need to live near their work."[1] (This may be especially true of dual income families.)

Table 92 shows the great increase in fuel or heat expenditures for schools in current dollars between 1969-70 and 1973-74. These are for a sample of states across the country, organized by region. The data brackets the fuel crisis, 1969-70 being before, 1973-73, after the event. It is noteworthy that in the northeast there was an average increase of 138 percent. It was greater than that for the Southeast (42 percent), in the Central states (47 percent), and in the Western states (75 percent).

The percentage of school children being bused has, or course, significantly increased in the last decade as a result of civil rights demands, legislation and court orders. That,pattern is shown in Table 93.

In 1950-60, 37.6 percent of the pupils were bussed. This rose to 51.5 percent in 1973-74. The total expenditures in that same interval rose from less than a half billion dollars to $1,858,141,000, while the cost per pupil rose from $40 to $87 in current dollars.

While in current terms that $87 represents approximately 5 percent of the per pupil cost for pupils transported and less than 3 percent of the cost per pupil for all pupils, it may still be seen as a opportunity for curtailment of school costs in a time of shrinking budgets and inflation.

It should be further noted that the costs per pupil for transportation are only to a small extent attributable to fuel. Decisions about how to respond to the energy cost situation ought not be arbitrarily exercised without attention to the possible effects on primary educational functions.

B. The Rise of the Knowledge Industries and Other Structural Changes In Our Work Patterns

Since 1910, there has been sharp decline in the percentage of workers in the primary industries, such as agriculture, forestry, fishing, and minerals extractions. A relatively stable percentage has been in the secondary sector of manufacturing and construction. There has been a sharp increase in the number in the tertiary sector -- trade, finance, real estate, transportation, communication, etc. (see Figure 96).

The details of such distribution in the last 25 years are shown in Table 94. However, those figures do not reveal what is a major, basic and relatively new trend within the labor sector, the movement toward

Table 92

Fuel and heating costs for U.S. Schools, by State: 1969-70, 1971-72, and 1973-74.

(Current dollars in thousands)^2

UNITED STATES	1969-70	1971-72	1973-74	Change from 1969 to 1974
NORTHEAST	47,035		111,929	1.38
Connecticut	-	-	-	-
Delaware	932	1,493		
District of Columbia	515	840		
Maine	2,190	2,732	4,498	1.05
Maryland	3,997	8,225	11,809	1.95
Massachusetts	7,967	12,668	26,192	2.29
New Hampshire	1,300	1,663	2,911	1.24
New Jersey	10,140		25,456	1.51
New York	-			
Pennsylvania	18,616	26,267	35,359	.90
Rhode Island	1,504	2,116	3,245	1.16
Vermont	1,325	1,630	2,459	.86
SOUTHEAST	29,341		41,773	.42
Alabama	-	-	-	
Arkansas	1,888	2,384	2,282	.21
Florida	2,740	2,860	-	.04
Georgia	4,668	-	-	
Kentucky	3,302	3,883	4,092	.24
Louisiana	1,559	1,669	2,037	.31
Mississippi	1,985	1,840	2,085	.05
North Carolina	4,580	6,447	8,070	.76
South Carolina	3,000	3,068	3,864	.29
Tennessee	4,587	5,476	6,243	.36
Virginia	5,591	7,018	10,069	.69
West Virginia	2,489	2,568	3,031	.22
CENTRAL	94,896		139,874	.47
Illinois	16,941	22,551	26,969	.59
Indiana	9,716	11,284	14,725	.52
Iowa				
Kansas	9,873			
Michigan	19,765	23,226	29,577	.50
Minnesota	8,904	10,995	13,880	.56
Missouri	6,474	7,062	9,292	.44

Table 92 Continued

	1969-70	1971-72	1973-74	Change from 1969 to 1974
Nebraska	2,747	3,066	3,937	.43
North Dakota	1,752	1,964	2,771	.58
Ohio	17,491	20,144	21,310	.28
South Dakota	1,551	1,778	2,481	.60
Wisconsin	9,555	11,407*	13,932	.46
WEST	14,652		25,647	.75
Alaska	1,265			
Arizona				
California				
Colorado	2,867	3,432		.20
Hawaii				
Idaho	1,213	1,584	2,071	.71
Montana				
Nevada	626	753	1,088	.74
New Mexico	1,376	1,317	1,323	.32
Oklahoma	2,375	2,399	3,108	.31
Oregon	2,954	4,659	5,938	1.01
Texas	5,555			
Utah	1,525	1,768	2,406	.58
Washington	4,583	6,978	9,213	1.01
Wyoming	1,818	698		
OUTLYING AREAS				
American Samoa				
Canal Zone				
Guam				
Puerto Rico				
Virgin Islands				

SOURCE: Department of Health, Education, and Welfare, National Center for Education Statistics, Statistics of State School Systems.

Table 93

Number and percent of public school pupils transported at public expense, and current expenditures for transportation: United States, 1929-30 to 1973-74 3

School year	Total enrollment	Pupils transported at public expense		Expenditure of public funds	
		Number	Percent of total enrollment	Total, excluding capital outlay (in thousands)	Average cost per pupil transported
1	2	3	4	5	6
1929-30 . . .	25,678,015	1,902,826	7.4	$54,823	$28.81
1931-32 . . .	26,275,441	2,419,173	9.2	58,078	24.01
1933-34 . . .	26,434,193	2,794,724	10.6	53,908	19.29
1935-36 . . .	26,367,098	3,250,658	12.3	62,653	19.27
1937-38 . . .	35,975,108	3,769,242	14.5	75,637	20.07
1939-40 . . .	25,433,542	4,144,161	16.3	83,283	20.10
1941-42 . . .	24,562,473	4,503,081	18.3	92,922	20.64
1943-44 . . .	23,266,616	4,512,412	19.4	107,754	23.88
1945-46 . . .	23,299,941	5,056,966	21.7	129,756	25.66
1947-48 . . .	23,944,532	5,854,041	24.4	176,265	30.11
1949-50 . . .	25,111,427	6,947,384	27.7	214,504	30.88
1951-52 . . .	26,562,664	7,697,130	29.0	268,827	34.93
1953-54 . . .	[1] 25,643,871	[1] 8,411,719	32.8	307,437	[1] 36.55
1955-56 . . .	[1] 27,740,149	[1] 9,695,819	35.0	353,972	[1] 36.51
1957-58 . . .	[1] 29,722,275	[1] 10,861,689	36.5	416,491	[1] 38.34
1959-60 . . .	[1] 32,477,440	[1] 12,225,142	37.6	486,338	[1] 39.78
1961-62 . . .	[1] 34,682,340	[1] 13,222,667	38.1	576,361	[1] 43.59
1963-64 . . .	[1] 37,405,058	[1] 14,475,778	38.7	673,845	[1] 46.55
1965-66 . . .	[1] 39,154,497	[1] 15,536,567	39.7	787,358	[1] 50.68
1967-68 . . .	[1] 40,827,965	[1] 17,130,873	42.0	981,006	[1] 57.27
1969-70 . . .	[1] 41,934,376	[1] 18,198,577	43.4	1,218,557	[1] 66.96
1971-72 . . .	[1] 42,254,272	[1] 19,474,355	46.1	1,507,830	[1] 77.43
1973-74 . . .	[1] 41,438,054	[1] 21,347,039	51.5	1,858,141	[1] 87.04

[1] Pupils in average daily attendance.

knowledge-based and knowledge-dependent industries. Porat's work as shown in Figure 97 makes the point that 50 to 55 percent of the current labor force is in information and information-related industries.

Crucial to the present study is the rising dependency on information and scientific, technical and professional occupations. There has been a major shift in strategic resources from financial capital to knowledge and an associated growth of knowledge-related industries. All of this, of course, has major implications for three aspects of education:

- The preparation for the world at work
- The appreciation of the fundamental organization of this rapidly restructuring society for woman labor
- The equalization of many job opportunities between men and women, young and old, the physically and less physically able

Changes in the structure of occupations reduce the general dependency on physical strength and stamina for the largest number of occupations. This change opens the door to wider scale employment of women.

Since the information society puts a great demand on the ability to read and write English, the completion of some level of formal education, either high school or college, is a crucial element in being able to take the first few steps on the economic mobility ladder. The shifts to the information industries are also opening up new kinds of diversification in the size and location of work facilities. The decentralization of facilities opens further opportunities to women for part-time employment or for full-time employment closer to home.

Table 94

Distribution of Employment Among Major Occupational Divisions in the United States 1950, 1960, and 1970 -- in Percent[4]

	1950	1960	1970
All Occupations*	100	100	100
White Collar United States	36.9	41.4	48.2
Blue Collar United States	39.3	36.7	35.9
Farm Workers United States	11.9	6.1	3.1
Service Workers United States	10.1	11.1	12.8

*1950, 1960 percentages total less than 100 because of unreported occupations, approximately 1% and 5%, respectively.

Figure 96

Percent Distribution of Employment in Industry by Sector in the United States 1910-1970[5]

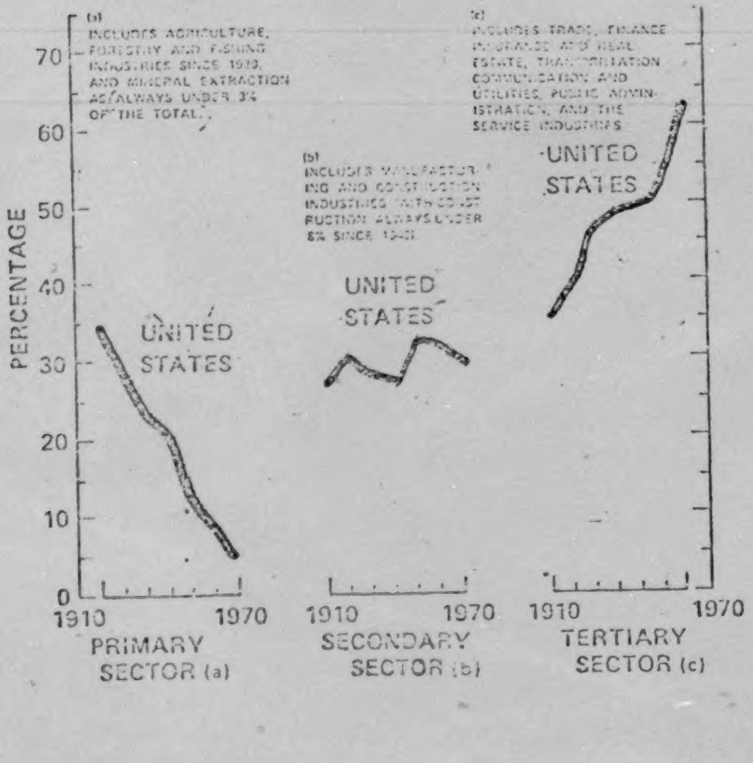


Figure 97

Percent of Labor Force in the
Information Industries[6]

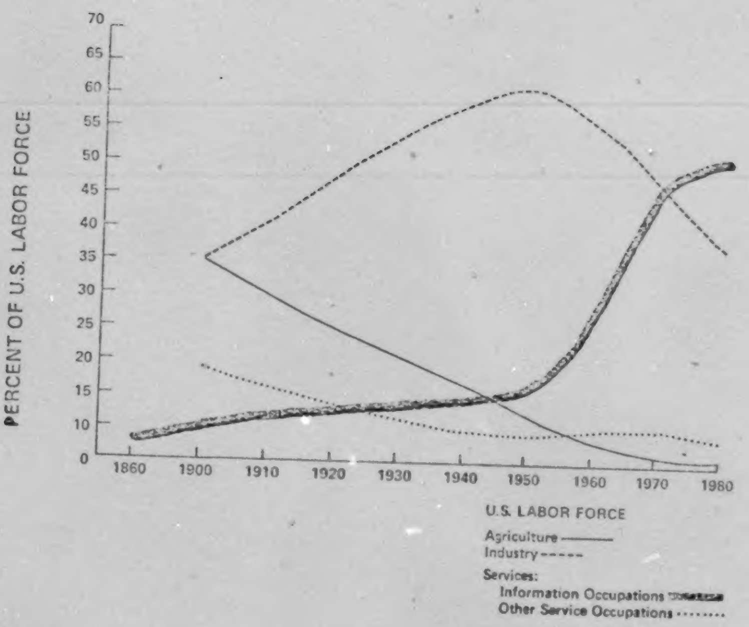


Table 95

The Post-Industrial Society: A Comparative Schema[7]

MODES	PRE-INDUSTRIAL	INDUSTRIAL	POST-INDUSTRIAL
MODE OF PRODUCTION	Extractive	Fabrication	Processing; Recycling
ECONOMIC SECTOR	Primary *Agriculture* *Mining* *Fishing* *Timber* *Oil and Gas*	Secondary *Goods-Producing* *Manufacturing* *Durables* *Non-durables* *Heavy Construction*	Services Tertiary *Transportation* *Utilities* Quaternary *Trade* *Finance* *Insurance* *Real Estate* Quinary *Health* *Research* *Education* *Government* *Recreation*
TRANSFORMING RESOURCE	Natural Power *Wind, Water, Draft animals, Human muscle*	Created Energy *Electricity—oil, gas, coal* *Nuclear power*	Information[1] *Computer and data-transmission systems*
STRATEGIC RESOURCE	Raw Materials	Financial Capital	Knowledge[2]
TECHNOLOGY	Craft	Machine Technology	Intellectual Technology
SKILL BASE	Artisan, Manual worker, Farmer	Engineer, Semi-skilled worker	Scientist, Technical and Professional occupations
METHODOLOGY	Common Sense, Trial and error, Experience	Empiricism, Experimentation	Abstract Theory: models, simulations, decision theory, systems analysis
TIME PERSPECTIVE	Orientation to the past	Ad hoc adaptiveness, experimentation	Future orientation: forecasting and planning
DESIGN	Game Against Nature	Game Against Fabricated Nature	Game Between Persons
AXIAL PRINCIPLE	Traditionalism	Economic Growth	Codification of Theoretical Knowledge

Table 96

THE INFORMATION INDUSTRIES [8]

	Approximate Gross Revenues (in billions of dollars)					
	1970	1971	1972	1973	1974	1975
Broadcast television	2.8	2.8	3.2	3.5	3.8	NA
Cable television	0.3	0.3	0.4	0.5	0.6	0.7
Broadcast radio	1.1	1.3	1.4	1.5	1.6	NA
Telephone	18.2	20.0	22.6	25.5	28.3	31.3
Telegraph	0.4	0.4	0.4	0.5	0.5	0.5
Specialized common carriers	0.0	0.0	0.0	0.0	0.0	0.0
Satellite carriers	0.1	0.1	0.1	0.1	0.1	0.1
Mobile radio systems	2.0	2.2	2.4	2.6	2.9	NA
Motion pictures	3.8	3.8	2.9	3.8	NA	NA
Organized sports, theaters, etc.	4.4	NA	NA	NA	NA	NA
Computer software suppliers Computer service suppliers >	1.5	1.7	2.0	2.5	3.0	3.6
Postal service	6.3	6.7	7.9	8.3	9.0	10.0
Private information delivery services	0.7+	0.8+	1.0+	1.2+	1.3+	1.6+
Newspapers; wire services	7.0	7.4	8.3	8.9	9.4	9.7
Periodicals (including newsletters)	3.2	3.2	3.5	3.9	4.0	4.2
Business consulting services	0.9	1.1	1.1	1.5	NA	NA
Advertising	7.9	7.6	8.0	8.6	NA	NA
Marketing and sales	32.4	37.7	41.3	43.4	45.5	NA
Brokerage industries	40.6	47.4	55.3	61.0	NA	NA
Book publishing and printing	3.4	3.6	3.8	4.2	4.6	4.9
Libraries	2.1	NA	3.6	NA	NA	NA
Schooling	70.2	76.7	83.1	89.1*	98.8*	110.4*
Research and development	26.0	26.7	28.4	30.4*	32.0*	34.3*
Federal information institutions						
Census Bureau	0.1	0.1	0.1	0.1	0.1	0.1
National intelligence community	4.0+*	NA	NA	NA	7.0*	10.0+*
National Technical Information Service	0.0	0.0	0.0	0.0	0.0	0.0
Social Security Administration	1.0	1.2	1.3	1.4	1.9	2.2
County agents	0.3	0.4	0.4	0.5	0.5	0.6
Banking and credit	61.1	68.9	77.6	101.3	NA	NA
Insurance	92.6	103.5	113.8	123.6	NA	NA
Legal services	8.5	9.6	10.5	12.2	NA	NA
U. S. Gross National Product	977.1	1,054.9	1,158.0	1,294.9	1,406.9	1,498.9

*estimated

The general structure of this so-called post industrial society in contrast to the pre-industrial and industrial society are shown in Table 95 from Professor Daniel Bell. As near as we can tell, the implication of these changes in the work force has not been integrated into any aspect of the nation's school systems.

Some sense of the rapid growth of the information industries may be gotton from Table 96 which shows the gross revenues over a six-year interval.

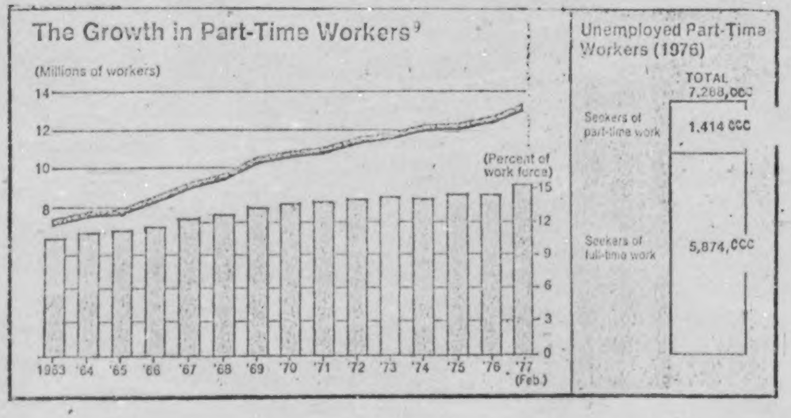
Part-Time Work

An interesting subsidiary development in the structure of the work force is the growth of part-time work. A recent Bureau of Labor Statistics report indicates that between 1963 and 1977, part-time workers have increased from less than 8 million to more than 13 million. They have grown to comprise about 16 percent of the work force (Figure 98).

Specifically, from the point of view of women and work, half of the 7 million women who joined the work force in the past decade entered as part-timers. Of the present 13 million part-time workers (in contrast to work force), women predominate by 2 to 1. Women outnumber men 7 to 1 in the 25-54 age group.

Among the 7,288,000 unemployed workers in 1976, 1,414,000 were only seeking part-time work.

Figure 98


The Growth in Part-Time Workers[9]
(Millions of workers)
14
12
10
8
(Percent of work force)
15
12
9
6
3
0
1963
'64
'65
'66
'67
'68
'69
'70
'71
'72
'73
'74
'75
'76
'77 (Feb.)
Unemployed Part-Time Workers (1976)
TOTAL 7,288,000
Seekers of part-time work
1,414,000
Seekers of full-time work
5,874,000

Flextime

A third element in the work force influencing the entry, work selection, occupational opportunity and family interactions is a growth of flextime and other alternative work schedules. In these employment schedules the whole work force is not locked to a fixed time interval or shift.

According to a recent study by R. M. Kanter, "flextime would seem especially critical for married women with family responsibilities and for single parents. It might also help those who like to care for the sick or elderly within the family rather than in outside institutions."[10]

Flextime schedules may permit more work force participation by women at their discretion, and hence, may at the same time, increase the demand for day care services. On the other hand, flextime may permit more informal familial, neighborhood or other non-institutionalized day care arrangements. This may reduce the demand for childcare services in schools or other formal institutions.

Section I -- INTRODUCTION

1. U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 643, Washington, D.C., January 1977, Figure 2.

2. Morrison, Peter A. "The Demographic Context of Educational Policy Planning," The Aspen Institute for Humanistic Studies, New York, 1976, p. 9.

3. Throughout this report in places too numerous to mention or cite, the Bureau of the Census, particularly through Dr. Larry Sutter, as point of contact, was especially valuable in checking data, updating information, and, in general, supplying and pointing out useful materials.

   In the same way the National Center for Education Statistics, as appropriate, performed the same function principally through the good offices of Dr. Mary Golladay, our point of contact with that agency.

Section II -- DEMOGRAPHIC TRENDS

1. This section has drawn very heavily on census data and on reports and discussions with Dr. Peter Morrison of the Rand Corporation and Dr. Harriet Fishlow of the University of California.

2. U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 632, July 1976.

3. U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 601, October 1975.

4. Census Bureau, Series P-25, No. 601.

5. Morrison, p. 4.

6. Census Bureau, Series P-20, No. 301, June 1975.

7. See ref. 6.

8. See ref. 6.

9. WHITE POPULATION-1860-69 to 1950-59 from Ansley J. Coal and Melvin Zelnick, New Estimates of Fertility and Population in the United States (Princeton: Princeton University Press, 1963), table 1; 1960-69 from National Center for Health Statistics, U.S. Public Health Service, Vital Statistics of the United States 1970,

Vol. I - Natality, table 1-2; 1970-74 from National Center for Health Statistics, U.S. Public Health Service, Monthly Vital Statistics Report, "Final Natality Statistics, 1974," table 1. BLACK POPULATION-1860-69 to 1965-69 from Ansley J. Coale and Norfleet W. Rives, "A Statistical Reconstruction of the Black Population of the United States 1880-1970: Estimates of True Numbers by Age and Sex, Birth Rates, and Total Fertility," Population Index, Vol. 39, No. 1, January, 1973, table 7; 1970-74 is from the same source as the White population.

10. See ref. 9.

11. 1920-1973 data: NCES, U.S. Public Health Service, Fertility Table for Birth Cohorts by Color: United States, 1917-1973, Tables 3b and 3c.
1974 data: NCES, Monthly Vital Statistics Report, "Final Natality Statistics 1974," Table 3.

12. See ref. 11.

13. Kreps, Juanita M., ed., Women and the American Economy: A Look to the 1980's, Prentice-Hall, Inc., New Jersey, 1976, p. 48.

14. Census Bureau, Current Population Reports, Series P-20, No. 263, April 1974; Calculated from Tables 29 and 39.

15. Census Bureau, Current Population Reports, Series P-20, No. 301, June 1975.

16. Fishlow, Harriet, "Demography and Changing Enrollments," Unviersity of California, Berkeley, May 14, 1977.

17. Fishlow, see above.

18. Census Bureau, Current Population Reports, Series P-25, No. 601, October 1975, p. 30.

19. Census, see above, p. 28.

20. Census, see ref. 18, Tables 1 and P.

21. Fishlow, see ref. 16.

22. Census, see ref. 18, Tables 7-12 and D-2.

Section III - THE FAMILY

1. For general background, this section has drawn on the monograph by Hugh Carter and Paul Glick, Marriage and Divorce: A Social and Economic Study, Harvard University Press, 1976. More detailed information has been drawn from Juanita Kreps, Women in the American Economy, Prentice-Hall, New Jersey, 1976, and the monograph by Heather Ross and Isabel Sawhill, Time of Transition, The Urban Institute, 1975.

2. Norton, Arthur J., "Methodological Approach to Longitudinally Projecting the Population of Children Born in 1977 who may be Expected to Spend Some Meaningful Length of Time in a Single-Parent Situation Before Reaching the Age of 18 - and Related Discussion," Research Note, Population Division, U.S. Bureau of the Census, April 8, 1977.

3. Ross, Heather L. and Sawhill, Isabel V., Time of Transition: The Growth of Families Headed by Women, The Urban Institute, Washington, D.C. 1975, p. 20.

4. Glick, Paul C. and Norton, Arthur J., "Marital Instability: Past Present and Future," Journal of Social Issues, Vol. 32, No. 1, 1976.

5. U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 296, March 1976.

6. U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 306, "Marital Status and Living Arrangements: March 1976," U.S. Government Printing Office, Washington, D.C.

7. U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 306; 1970 Census of Population, Vol. II, 4B and 1960 Census of Population, Vol. I, U.S. Summary, Table 185.

8. See above.

9. Census, see ref. 7.

10. Taeuber, Karl E. and Sweet, James A., "Family and Work: The Social Life Cycle of Women," from Women and the American Economy: A Look to the 1980's, Juanita M. Kreps, ed., Prentice-Hall, 1976.

11. Kreps, Juanita M., ed., Women and the American Economy: A Look to the 1980's, "Home Work, Market Work and the Allocation of Time," by J. Kreps and R. John Leaper, Prentice-Hall, Inc., New Jersey, 1976, p. 43.

12. Kreps, p. 43.

13. U.S. Department of Labor, Bureau of Labor Statistics, Special Labor Force Report 174: Children of Working Mothers, March 1974, p. 64.

14. Norton, Arthur J., see ref. 2

15. U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 296, Table 4.

16. U.S. Department of Labor, Bureau of Labor Statistics, see ref. 13, p. 66.

17. Norton, Arthur J., see ref. 2.

18. Ross and Sawhill, Time of Transition, p. 2.

19. Ross and Sawhill, p. 186.

20. U.S. Bureau of the Census, Current Population Reports, Series P-23, No. 59.

21. Ross and Sawhill, p. 189.

22. National Academy of Sciences, Toward a National Policy for Children and Families, Washington, D.C. 1976, p. 19.

23. Ross and Sawhill, p. 85.

24. U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 104, March 1974.

25. See above.

26. National Academy of Sciences, Toward a National Policy for Children and Families, p. 23.

27. U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 93 (Advance Report).

28. Census Bureau, Current Population Reports, Series P-60, No. 105, Table 25, revised by M. Henson, 4/28/77.

29. U.S. Department of Health, Education and Welfare, "White Families Lead Welfare Rolls," April 16, 1976.

30. U.S. Bureau of the Census, Characteristics of the Low-Income Population, 1973, Money Income and Poverty Status of Families and Persons in the U.S., 1974 and update.

31. Social Research Group, The George Washington University (Kurt Snapper, Harriet Barriga, Faye Baumarner, Charles Wagner), The Status of Children, Washington, D.C., 1975, p. 12.

32. See above.

33. U.S. Bureau of the Census, Money Income and Poverty Status of Families and Persons in the United States: 1974 and 1975 Revisions and Current Population Survey, March 1976.

34. U.S. Bureau of the Census, "Survey of Income and Education," 1975.

35. U.S. Bureau of the Census, "Survey of Income and Education," 1970.

36. U.S. Bureau of the Census, Dr. Larry Suter.

37. U.S. Bureau of the Census, Current Population Surveys, 1975.

38. Social Research Group, The Status of Children, p. 11, revised by Dr. Larry Suter, Census Bureau.

39. U.S. Bureau of the Census, "Survey of Income and Education," 1975.

40. Record, R.G., McKeown, Thomas and Edwards, J.H., "The Relation of Measured Intelligence to Birth Order and Maternal Age," Ann. Hum. Genet., London, 1969, pp. 33-61.

41. U.S. Bureau of the Census, Current Population Reports, Series P-60, No. 100, "Household Money Income in 1974 and Selected Social and Economic Characteristics of Households."

42. See above.

43. See ref. 41.

44. National Center for Health Statistics, Vital Statistics of the United States, 1971: Vol. I - Natality, Tables 1-30 and NCHS annual issues, Monthly Vital Statistics Report, "Final Natality Statistics," 1972-74.

45. Florida Department of Health and Rehabilitative Services, Public Health Statistics Section.

Section IV -- WOMEN'S ENTRY INTO THE WORKING FORCE

1. This section draws extensively from the Kreps and Sawhill monographs cited below as well as from the 1975 Handbook on Women Workers, produced by the Women's Bureau of the U.S. Department of Labor, Bulletin No. 297.

2. Daniels, Arlene K., Project on the Status and Education of Women by the Association of American Colleges, the National Science Foundation and Arlene Kaplan Daniels, "A Survey of Research Concerns on Women's Issues," Association of American Colleges, Washington, D. C., 1975, p.10.

3. U. S. Department of Labor, Women's Bureau, 1975 Handbook on Women Workers, Bulletin No. 297, Washington, D. C., p.9.

4. Labor Department, Women's Bureau, p. 243.

5. See above, p. 244.

6. Kreps, Juanita M., ed., Women and the American Economy, A Look to the 1980's, Prentice-Hall, Inc., 1976, p.66, from Manpower Report of the President, April 1975

7. Labor Department, Women's Bureau, p. 13.

8. Kreps, p. 69.

9. Kreps, p. 67.

10. Labor Department, Women's Bureau, p. 100.

11. Women's Bureau, p. 23.

12. Women's Bureau, p. 103.

13. Women's Bureau, p. 124.

14. Women's Bureau, p. 16.

15. Social Research Group, The George Washington University, The Status of Children, Washington, D. C., 1975, p. 9.

16. See above, p.9.

17. Social Research Group, p. 10.

18. Women's Bureau, p. 66.

19. Kreps, p. 76.

20. Kreps, p. 54.

21. Kreps, p.54.

22. Women's Bureau, p.27.

23. Women's Bureau, p.22.

24. Hartmann, Heidi I., "Womens' Work in the United States," Current History, Vol. 70, No. 416, May 1976, p.229.

25. Morrison, Peter A., "The Growth of Multiworker Families," unpublished paper, Rand Corp.

26. Women's Bureau, p. 136.

27. Ross, Heather L. and Sawhill, Isabel V., Time of Transition: The Growth of Families Headed by Women, Urban Institute, Washington, D. C., 1975, p.77.

28. Ross and Sawhill, p.10.

29. U.S. Bureau of the Census, Current Population Reports, Special Studies, Series P.23, No. 54, U.S. Government Printing Office, Washington, D. C., 1975.

30. Morrison, Peter A., p.16.

31. Morrison, p.16.

32. Morrison, p.19.

33. Morrison, p.19.

Section V -- IMMIGRATION

1. This section draws principally on Census data and a special survey of language sponsored by the National Center for Education Statistics.

2. U.S. Immigration and Naturalization Service, 1975 Annual Report, Table 10.

3. U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 267 and 279, Washington, D.C.

4. U.S. Bureau of the Census, Current Population Reports, Series P.26, No. 632, July 1976.

5. The World Almanac and Book of Facts 1976, Newspaper Enterprise Association, New York, New York.

6. National Center for Education Statistics, "July 1975 Survey of Languages," The Condition of Education, 1977 Edition, p.8.

7. NCES, p.8.

8. NCES, p.8.

9. NCES, p.9.

10. NCES, p.94.

11. NCES, p.206.

12. NCES, p.95.

13. NCES, p.96.

14. NCES, p.208.

15. NCES, p.97.

16. NCES, p.98.

17. U.S. Bureau of the Census, Current Population Reports, Series p.20, No. 313, Dec. 1976.

Section VI -- LOCAL MOBILITY AND INTERNAL MIGRATION

1. To a large extent this section draws from the work of Calvin Beale, U.S. Department of Agriculture; Larry Long, U.S. Bureau of the Census and Larry Ledebur of the Commerce Department.

2. Ledebur, Larry C., "The Dynamics of Change: The Urban-Rural Distribution of Work and Residence in the United States," The Research Review 1976, U.S. Department of Commerce, Washington, D.C., p. 12-24.

3. Beale, Calvin L. "A Further Look at Nonmetropolitan Population Growth Since 1970," Amer. J. Agr. Econ., December 1976, p. 953-58.

4. U.S. Bureau of the Census, Current Population Reports, Series P-20, No. 285, U.S. Government Printing Office, Washington, D. C., Oct. 1975.

5. Beale, Calvin L., see ref. 3.

6. Ledebur, Larry C., see ref. 2., p.17.

7. Ledebur, Larry, p.20.

8. Ledebur, Larry, p.22.

9. Domestic Council of the White House, "The Changing Issues for National Growth: 1976 Report on National Growth and Development," HUD-386-2-CPD, February 1976, p.27.

10. Domestic Council, p.28.

11. Domestic Council, p.29.

12. Domestic Council, p.23.

13. Domestic Council, p.23.

14. National Center for Education Statistics, The Condition of Education 1976 Edition, U.S. Government Printing Office, Washington, D.C., 1976, p. 155.

15. NCES, above, p.157.

16. Morrison, Peter A. "The Demographic Context of Educational Policy Planning," Aspen Institute for Humanistic Studies, New York, 1976, p.27.

17. Farrell, William E., "Influx of Population Down in Urban Areas," New York Times, June 30, 1975, p.17.

18. U.S. Bureau of the Census, Current Population Reports.

19. Personal communication from Dr. Calvin Beale, U.S. Department of Agriculture.

20. Long, Larry H. "Does Migration Interfere with Children's Progress in Schools?" (Revised version of a paper presented at the 1973 annual meeting of the American Sociological Association, August 1973, New York city), Sociology of Education, V. 48, Summer 1975, p.367-381.

21. Long, Larry H., "How the Racial Composition of Cities Change," Land Economics, LI 3, August 1975, p. 261.

22. Long, p.263.

23. Long, p.264.

24. Shannon, L. and M., Minority Migrants in the Urban Community, Sage Publ., 1973, p.328.

25. Orfield, Gary, "White Flight Research," The Educational Forum, v. 40., May 1976, p.526.

26. U.S. Bureau of the Census, 1970 Census of Population, "Lifetime and Recent Migration" Study, Table 6.

27. Orfield, p.529.

Section VII -- DECLINING ENROLLMENTS

1. This section largely draws on a series of monographs and studies sponsored by the National Institute of Education as well as on the data collected by the National Center for Education Statistics.

2. The Minnesota State Planning Commission, "Report of the Commission on Minnesota's Future," St. Paul, Minn., January 1977, p. 39.

3. County Map of the State of Minnesota, American Map Co., Inc., New York, N.Y., No. 17582-A.

4. National Center for Education Statistics, The Condition of Education, 1976 Edition, U.S. Government Printing Office, Washington, D.C.

5. See above.

6. The National Education Association, "Estimates of School Statistics, 1971-72."

7. Prepared by the Education Finance Center, Education Commission of the States.

8. See above.

9. Goettel, Robert J., "Declining Enrollments," Section of The Imperative of Leadership, A Report on Declining Enrollments, Vol. II, No. 1, National Association of State Boards of Education, Denver, Colo. 1976.

10. See above.

11. Council of the Great City Schools data, Washington, D. C., Jan. 1976.

12. See Above.

13. See ref. 11.

14. See ref. 11.

15. See ref. 11.

16. Jack Leppert and Dorothy Routh, An Analysis of State School Finance Systems as Related to Declining Enrollments, prepared under contract with the National Institute of Education, MGT of America, Inc. Tallahassee, Fla., September, 1976.

17. National Center for Education Statistics Projections, 1976, U.S. Department of Health, Education and Welfare.

18. Morrison, Peter A., "The Demographic Context of Educational Policy Planning," the Aspen Institute for Humansitic Studies, 1976.

19. National Center for Education Statistics, The Condition of Education, 1976 Edition, p. 129.

20. Callahan, John J., Wilken, William H., Boonin, Robert, Declining Enrollment: The Cloud and Its Silver Lining, Legislators' Education Action Project, National Conference of State Legislatures, Prepared under contract for The National Institute of Education, Division of School Finance and Organization, January 31, 1977.

21. See above.

22. See ref. 20.

23. Mueller, Van D., "The Educational Policy Setting and Fluctuating School Enrollments," A paper presented at a Symposium on Fluctuating Enrollments: Implications for Manpower Planning and Resource Allocation, Session 13-14, 1977 Annual Meeting, American Research Association, New York City, April 6, 1977.

24. Personal communication, Dr. Harriet Fishlow, University of California, Berkeley.

25. Florida, University of, College of Education, Social Forecasting and Educational Planning, Progress Report No. 1, January 1, 1977.

Section VIII -- RESPONSES TO DECLINE

1. This section, particularly that portion dealing with day care, draws as background on the work of Meredith Larson, Stanford Research Institute and the George Washington University, monograph on Status of Children, 1975, produced by the Social Research Group of GWU.

2. U. S. Bureau of the Census, Current Population Reports, Series P-20, No. 298, U.S. Government Printing Office, Washington, D.C., October, 1976.

3. Census Bureau, see above.

4. See ref. 2.

5. Larson, Meredith A., Federal Policy for Preschool Services: Assumptions and Evidence, Educational Policy Research Center, SRI, May 1975, p.28.

   See also:
   Suter, Larry E. and Waite, Linda J., "Worker, Housewife, Mother: Role Decisions of Young Women," Chapter II, Birth Expectations and Working Plans of Young Women: Changes in Role Choices, U.S. Department of Commerce, Bureau of the Census, Washington, D.C.

Shortlidge, Richard L., Waite, Linda J. and Suter, Larry E. "Changes in Child Care Arrangements of Working Women: 1965-1971," reprinted from the 1974 Business and Economic Statistics Section Proceedings of the American Statistical Association, p. 209.

Waite, Linda J. and Stolzenberg, Ross M., "Intended Childbearing and Labor Force Participation of Young Women: Insights from Nonrecursive Models, "American Sociological Review, 1976, Vol. 41 (April), p. 235-252.

6. National Center for Educational Statistics, The Condition of Education, 1977 Edition, p. 28.

7. U.S. Bureau of the Census, Current Population Survey, October 1967-1976.

8. See Above.

9. NCES, The Condition of Education, p. 29.

10. U.S. Bureau of the Census, Dr. Larry Suter.

11. Personal communication from Merdith Larson.

12. Larson, Meredith A., see ref. 5, p. 33.

13. Larson, p. 37.

14. Larson, p. 44.

15. Larson, p. 39.

16. National Academy of Science, Toward A National Policy for Children and Families, NAS, Washington, D.C. 1976, p.121.

17. See above, p. 128.

18. See above, p. 130.

19. Daniels, Arlene Kaplan, "A Survey of Research Concerns on Women's Issues." Project on the Status and Education of Women, ed. A.K. Daniels, Association of American Colleges, May 1975.

20. Personal communication from R. B. Zajonc.

21. Broman, Sarah H., Nichols, Paul L. and Kennedy, Wallace A., Preschool IQ: Prenatal and Early Developmental Correlates, L. Erlbaum Assoc., publ., Hillsdale, N.J., 1975.

22. Personal communication, R.B. Zajonc.

23. Zajonc, R.B., "Family Configuration and Intelligence," Science, April 16, 1976, p. 228.

24. Wm, Paul P.C., "The Effects of a Peer Tutorial Program On Academic Achievement and Self Concept of Low Achieving High School Mathematics Students," Dissertation, Florida State University, 1973.

Duff, Ruth E., "Effects of Pupil-Tutoring on Self-Perception and Academic Achievement of Primary Grade Tutors and Tutees," Dissertation, Southern Illinois University, 1973.

Richer, Howard M., "Peer Teaching as a Facilitator of Learning: Using Conservation of Substance as a Measure," Dissertation, UCLA, 1973.

25. Zajonc, R.B., p. 228.

26. Zajonc, R.B., p. 234.

27. Zajonc, R.B., p. 233.

28. Claudy, John G., "Cognitive Characteristics, Family Size, and Birth Order," Submitted for publication, AIR, Palo Alto, Calif., 1977.

29. Tough, Allen, The Adults' Learning Projects: A Fresh Approach to Theory and Practice in Adult Learning, Ontario Institute for Studies in Education, 1971.

Section IX -- SOME DATA ON SCHOOLS AND STUDENTS

1. National Center for Education Statistics, The Condition of Education, 1977 Edition, p. 42.

2. See above, p. 43.

3. See ref. 1, p. 44.

4. U.S. Department of Health, Education and Welfare, NCES, Fall Statistics of Public Schools, 1976, p.236.

5. NCES, Statistics of Public Elementary and Secondary Day Schools, Fall 1975, p. 238.

6. See above, p. 239.

7. NCES, Statistics of Public Schools, Fall 1965 and Statistics of Public Elementary and Secondary Day Schools, Fall 1975.

8. See above.

9. NCES, The Condition of Education, 1977 Edition, p. 41.

10. See above.

11. NCES/HEW, Education Directory for selected years.

12. Comptroller General of the United States, Report to the Congress, "Bilingual Education: An Unmet Need," (Office of Education), MWD-76-25, May 19, 1976.

13. NCES, The Condition of Education, 1977 Edition, p.81

14. NCES, Statistics of Public Elementary and Secondary Day Schools, Fall 1976 and Statistics of Public Schools.

15. See above.

Section X. FLIGHT TO THE PRIVATE SCHOOL

1. Erickson, Donald; Nault, Richard L.; and Cooper, Bruce S., Recent Enrollment Trends in U.S. Non-Public Schools: Final Report to the National Institute of Education, HEW, Feb. 1977.

2. See above.

3. See above, p.7.

4. See ref.1, p. 542.

5. NCES, The Condition of Education, 1977 Edition, Vol. 3., p. 74, Chart 4.02.

6. NCES, p. 74, chart 4.03.

7. NCES, p. 75, chart 4.04.

8. NCES, p. 76, chart 4.05.

9. NCES, p. 77, chart 4.06.

10. NCES, p. 78, chart 4.08.

12. NCES, p. 78, chart 4.09.

13. NCES, p.79, chart 4.10.

14. Giles, Michael W.; Gatlin, Douglas S. and Cataldo, Everett F. Executive Summary, Determinants of Resegragation: Compliance/Rejection Behavior and Policy Alternatives, National Science Foundation, April 26, 1976.

15. See above, Table 2, p.8.

16. See ref. 14, p. 14-18.

17. U.S. Commission on Civil Rights, "Reviewing a Decade of School Desegregation, 1966-1975," Washington, D.C., January 1977, p.6-7.

18. Civil Rights Commision Study, p. 75.

19. Civil Rights Commission Study, p. 78.

Section XI -- DECLINE IN THE AGE OF ONSET OF PUBERTY

1. Teenage childbearing is a special concern of Dr. Wendy Baldwin of the Center for Populations Research, National Institutes of Child Health and Development.

   She has authored a very useful Population Bulletin: "Adolescent Pregnancy and Childbearing: Growing Concerns for Americans." She has also produced a summary memorandum on teenage pregancy May 27, 1976 and is currently working on a paper, "Demographic Issues of Early Adolescence."

   A continuing source of information on teenage sexual behavior is the journal, *Family Planning Perspectives* published by Planned Parenthood Federation of America, Inc.

2. Handler, Philip, Editor, *Biology and The Future Of Man*, Oxford University Press, New York, 1970, p. 705.

3. Baldwin, Wendy H., "Adolescent Pregnancy and Childbearing: Growing Concerns for Americans," *Population Bulletin*, Vol. 31, No. 2, Population Reference Bureau, Washington, D.C., 1976

4. Senate Committee on Labor and Public Welfare, U.S. Congress, *School-Age Mother and Child Health Act, 1975*, S. 2538, November 4, 1975, p. 373.

5. Kantner, John F. and Zelnick, Melvin, "Sexual and Contraceptive Experience of Young Unmarried Women in the United States, 1976 and 1971, *Family Planning Perspectives*, Vol. 9, No. 2, March-April, 1977, p.56.

6. Kantner and Zelnick, p. 56.

7. Bernard, Jesse, "Adolescence and Socialization for Motherhood," *Adolescence in the Life Cycle: Psychological Change and Social Context*, S. Dragastin and Glen H. Elder, Jr., editors, John Wiley and Sons, Inc., 1975.

8. Presser, H.B. "Unintended Births Place Teenage Mothers at High Risk of Dropout, Unemployment, Dependency," Digest, *Family Planning Perspectives*, Vol. 8, No. 4, July/August 1976, p. 177

9. Furstenberg, Frank F., "The Social Consequences of Teenage Parenthood," *Family Planning Perspectives*, Vo. 8, No. 4, July/August 1976, p. 148-164.

Section XII. SOME NON-DEMOGRAPHIC VARIABLES INTERACTING WITH DEMOGRAPHY

1. Morrison, Peter A., "The Growth of Multiworker Families," unpublished paper, Rand Corporation.

2. National Center for Education Statistics, Statistics of State School Systems.

3. See above.

4. Personal communication, Todd La Port, University of California at Berkeley.

5. Parker, Edwin B. and Porat, Marc, analysis of U.S. Bureau of Labor Statistics data, Social Implications of Computer/Telecommunications Systems. Report No. 16, Program in Information Technology and Telecommunications, Center for Interdisciplinary Research, Stanford University, February 1975.

6. See above.

7. Bell, Daniel, "Welcome to the Post-Industrial Society," Physics Today, v. 29, February 1976, p. 47.

8. Parker and Porat, see ref. 6.

9. Flint, Jerry, "Growing Part-Time Work Force Has Major Impact on Economy," New York Times article, April 12,1977, p. 1, col. 5.

10. Kanter, Rosabeth Moss, Work and Family in the United States: A Critical Review and Agenda for Research and Policy, Russell Sage Foundation, 1977, p. 54.

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March 17, 1977

Honorable Emilio Q. Daddario
Director
Office of Technology Assessment
Washington, D. C.

Dear Mr. Daddario:

I am writing to inform you that I have received and reviewed the draft report on trends and issues in elementary and secondary education done by Mr. Joseph Coates of your office for the Subcommittee on Elementary, Secondary, and Vocational Education. The consensus of opinion among interested Subcommittee members and staff is that what would be most useful to the Subcommittee at this time is an expanded paper on the demographic trends in education discussed by Mr. Coates at some length in the draft report.

I am therefore requesting that Mr. Coates continue his work on trends in education, limiting his study to demographic trends, and submit a report including his findings and supportive data to the Subcommittee by the third week in April. It is my hope that the Subcommittee might be able to use this paper as a basis for foresight hearings on demographic trends in elementary and secondary education. If it becomes apparent that more time is needed to complete this report, please notify me and we will try to rearrange our schedule accordingly.

I appreciate the work the Office of Technology Assessment has done on this subject thus far and look forward to reading your final report on demographic data.

Sincerely,

Carl D. Perkins

Carl D. Perkins
Chairman

APPENDIX 2

DEVELOPING ISSUES IN ELEMENTARY AND SECONDARY EDUCATION

Prepared with the assistance of

Mr. Robert Lyke of the
Congressional Research
Service

May 6, 1977

DEVELOPING ISSUES IN ELEMENTARY AND SECONDARY EDUCATION

Abstract

Recent trends in school finance, educational achievement, and racial segregation are causing increasing concern throughout the country. This report identifies these developing educational issues, provides background information about them, and presents arguments for and against possible new Federal legislation.

In _school finance_ the principal issues are fiscal equalization among local school districts, property tax relief, and urban fiscal problems. Among the policy options being talked about are removing barriers to equalization in Federal aid programs, subsidizing State equalization efforts, subsidizing property tax relief, and providing special grants for urban education.

In _educational achievement_ the principal issues are declining academic achievement and inadequate minimum performance standards. Among the policy options discussed are subsidizing minimum competency testing, requiring performance goals, and subsidizing academic incentive programs.

In _racial segregation_ the principal issues are growing racial concentrations within large cities and increasing concentrations within metropolitan areas. Among the policy options discussed are providing grants for voluntary integration and providing additional subsidies for such alternatives to busing as magnet schools, schools without walls, and temporary or part-time programs.

The _appendix_ contains brief discussions of four questions one might ask about new Federal education legislation.

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DEVELOPING ISSUES IN ELEMENTARY AND SECONDARY EDUCATION

Introduction

This report discusses developing issues in American elementary and secondary education. It focuses on school finance, educational achievement, and racial segregation -- three subjects that are complex as well as significant.

Issues about school finance are not new, of course, nor are issues about educational achievement or racial segregation. All three have long been concerns of the States and local educational agencies. In recent years they have also come to be important concerns of the Federal government. Yet new developments throughout the country are raising questions about the future that are likely to provoke much debate:

--In school finance, can States continue to meet demands for fiscal equalization among local school districts? Can they provide property tax relief? Can city schools overcome their fiscal problems?

--In educational achievement, can schools halt what many believe to be declining academic achievement? Can they raise their minimum performance standards?

--In racial segregation, can the growing concentration of minority students within large cities be reversed? Can the increasing concentration within metropolitan areas be reversed?

Some people are urging the Federal government to play a leading role in helping the States and local educational agencies resolve these issues. But whether the Federal Government should take any action, and what action it should take are difficult questions to answer. This report attempts to help readers think about these questions. It analyzes each of the developing issues in turn, provides background information about previous Federal activity and other matters, and finally presents arguments for and against possible new Federal legislation.

The Federal role in education is likely to be an issue itself in the future, just as it has been in the past. People have different views about what the Federal government ought to do to help elementary and secondary schools. They also have different views about how this help ought to be provided. It would require another report to describe these disagreements, let alone to discuss the reasons for them. However, since ideas about what the Federal role ought to be may affect responses to the developing issues discussed in this report, readers may it useful to keep questions like the following in mind:

1. How are Federal education programs likely to affect State and local educational agencies?
2. How much money is likely to be spent on new Federal education programs?
3. What fiscal impact is money in Federal education programs likely to have?
4. What educational effects are Federal education programs likely to have?

Each of these questions is briefly discussed in the appendix.

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School Finance

There are three developing issues in school finance: fiscal equalization, property tax relief, and urban fiscal problems. All three are closely connected with one another.

The Issues

1. Fiscal Equalization

This decade has seen a revolution in school finance in the United States. Since the Serrano v. Priest decision in August 1971, in which the California Supreme Court struck down that State's educational finance legislation as unconstitutional, almost half the States in the country have reformed their systems for financing schools. Traditionally, local school districts have relied upon local property taxes for revenue. Districts with high property wealth could raise a lot of money per student with low tax rates. Districts with low property wealth, however, could raise only relatively little money per student with such rates. If they wanted to raise the same amount per student as wealthy districts, they would have to levy high tax rates. Some were able to do this, but most were not. As a result, disparities in expenditures among local school districts were common.

The current reforms have been designed to deal with this problem. Some new State finance programs have improved fiscal equity essentially by equalizing spending, that is, by reducing disparities in average per pupil expenditures among local school districts. Other new finance programs have improved fiscal equity essentially by equalizing revenue-raising capacity, that is, by reducing disparities in the money per pupil a given tax rate will produce in each district. As will be seen, this difference between the "equality of expenditiures" approach and the "fiscal neutrality" approach raises difficulties for Federal education policy. Nonetheless, in most reform States disparities have been reduced in both expenditures and tax rates.

Fiscal equity has also been improved in other ways. State aid formulas have been made more sensitive to variations in per pupil needs (so that handicapped students, for example, are given additional aid) and, in some cases to variations in the local costs of providing services. More of the responsibility for raising revenue has been shifted from local districts to the State, enabling use of broader-based taxes. In some States limits have been placed upon the growth of expenditures. Local property taxes have been held down and occasionally even reduced.

However, the revolution is not over. Many States yet to reform their systems of school finance are likely to try to do so. Courts may order some changes. In the State of Washington, a superior court judge recently ruled that local districts cannot be required to rely on special local tax levies; in Connecticut, the State Supreme Court declared the property tax inequities unconstitutional. A long trial over the New York aid program has just ended. Litigation undoubtedly will occur in other States. But with or without judicial rulings, legislatures eventually will be forced to confront the fiscal disparities.

Moreover, the issue is not dead even in States which have reformed. In some, only modest change has occurred so far. In others, the reforms are being challenged by school districts which lost State aid. Occasionally courts declare important parts of the new legislation invalid (for example, in Wisconsin the "negative recapture" provision, under which some revenue raised in wealthy districts is taken by the State, was found to be unconstitutional). Evaluation and reassessment appear to be common. Fiscal equalization is an issue that will last for some time to come.

2. Property Tax Relief

Tax relief is always popular. Since about 80 percent of all locally-raised public school revenue in the United States comes from property taxes, complaints about rising property levies and assessments are common. To be sure, some people object to increases primarily to express opposition to school policies. Some people object because they have no children in the schools. To others any tax on property seems inefficient and inequitable. Often local taxes are the only available target for those who want to protest government expenditures in general. Nonetheless, it is a fact that many people find it difficult to pay constantly rising property taxes.

Some economists think high property taxes contribute to economic decline. Communities with high levies and assessments may drive business firms away; they may have trouble attracting others to take their place. Jobs can be lost. Homeowners may lose incentive to improve their dwellings; realtors may find it harder to sell houses. New construction can stop. Eventually, the tax base may grow so slowly that even higher levies and assessments have to be enacted.

In recent years some steps have been taken to give property tax relief. Most States now provide exemptions or credits to the elderly or other low income taxpayers. Moreover, local school districts today obtain part of their money from other kinds of taxes. City school districts in particular draw upon sales taxes and income or wage taxes for a substantial proportion of their revenue.

Property tax relief may also result from school finance reform. As mentioned above, property tax rates often are higher in low wealth districts. If reform equalizes the revenue-raising capacity of school districts, low wealth districts then are able to raise the same amount of revenue per student as before with a lower tax rate (the difference would be made up by additional State aid). School finance reform has also placed restrictions on local school district expenditures, local property tax rates, or the property tax yields.

Despite these recent changes, property taxes are not likely to decline. Certainly school costs will keep rising. Municipal government expenditures, which also depend upon the property tax, will keep rising as well. For every community where rapid growth enables tax rates to be held constant, there will be others where they must be raised. Budget and bond referenda will be defeated, and occasionally schools will be closed. Property tax relief will be as much an issue in the future as it has been in the past.

3. Urban Fiscal Crisis Problems

City school districts once had privileged economic status. They do no longer. Last year alone a number of city schools were confronted with severe fiscal problems. As a consequence, teachers were dismissed, elective courses cut, extra-curricular activities abolished, and library and equipment purchases cancelled. Class sizes were increased and the school day shortened. Chicago and Toledo schools were forced to closed down for several weeks.

City schools' fiscal problems do not appear to be temporary. Several decades ago there were signs that they would be coming; today there are indications they will grow worse. The problems are partly due to the fact that the cost of educating students is greater in cities than elsewhere. A large proportion of city school students comes from low income families: they need different, and often additional, kinds of instruction programs. Moreover, many city teachers belong to effective employee organizations: they can bargain for higher salaries and fringe benefits. City schools are more expensive to build and more costly to maintain. Administrative costs are higher because of the large number of schools and the need for management reform.

The other reason city schools have fiscal problems is that their revenue is inadequate. This does not mean that urban school districts cannot spend as much as other districts: on the contrary, their average per pupil expenditures generally are higher than all but wealthy suburban districts. Their problem instead is due to the fact that their revenue is not increasing as rapidly as their costs are. Urban tax bases for the most part are not growing rapidly. Moreover, urban tax rates already are relative high and cannot be raised easily. Municipal governmental expenditures also consume a much larger proportion of total tax revenue in cities than they do in suburban or rural areas.

As a consequence, city school districts lack the financial leeway that other school districts typically have. They cannot meet rising costs as easily; they cannot maintain program quality as well.

State school finance reform is unlikely to help city school districts with their fiscal problems. In fact, fiscal equalization may contribute to their difficulties. Cities spend more per student then most school districts. More important, cities generally have higher than average property wealth per student. Under any reform plan which is designed to equalize expenditures or taxable wealth, cities are likely to lose State aid. In Illinois, recently adopted equalizing provisions will cost Chicago $60 million annually. There are ways of adjusting State financing plans to compensate urban school districts for the special problems they face (for example, students from low-income families might be weighted more heavily in the State allocation formula to reflect the greater cost of educating them; the measure of district wealth might reflect personal income as well as property assessments). However, few State legislatures are likely to enact such provisions unless courts order them to do so.

Background

1. Previous Federal Action

In 1973 the United States Supreme Court ruled in San Antonio Independent School District v. Rodriguez that the Texas school finance system did not violate the equal protection clause of the fourteenth amendment to the U.S. Constitution even though it failed to provide fiscal equalization among local school districts. The ruling ended attempts to use Federal courts to reform the way States finance public education (though some commentators believe that Federal courts may strike down some State finance laws in the future). Recent court activity in public school finance has all been in State courts, involving State constitutional and statutory law.

Federal legislation affecting school finance reform is limited. In Section 842 of the Education Amendments of 1974 the Congress authorized grants to States for developing and implementing equalization plans. Total appropriations for the grants have been $13.5 million. So far 33 States have received money. The 1974 Amendments also permitted a State to consider as locally raised revenue a portion of Federal impact aid payments to local educational agencies when the State has a finance program designed to equalize expenditures. States are otherwise forbidden to consider impact aid payments in calculating aid to local districts (see pages 14-16).

Many Federal elementary and secondary education programs give money to urban school districts. The largest is Title I of the Elementary and Secondary Education Act, which provides money for special educational programs for educationally deprived children. Most Title I money is allocated in basic grants to local educational agencies on the basis of the number of children from low-income families residing in the agencies' districts. Changes in the allocation formula during the past decade have sometimes favored and sometimes penalized cities. For fiscal years 1972 through 1975, Part C of Title I also authorized Special Grants for local educational agencies with high concentrations of children from low-income families; much of this money went to urban areas. Another statutory provision which presently favors cities is found in Section 3 of P.L. 874: public school children residing in low-rent public housing may be counted by local educational agencies for purpose of calculating Federal impact aid payments.

2. Steadily Rising Expenditures

Expenditures for elementary and secondary education in the United States have risen steadily since the Depression. They undoubtedly will continue to rise in the future. However, projecting precisely what increases are likely to be is difficult. For one thing, expenditure trends vary from State to State and from district to district. Some places will have enrollment growth; others, enrollment decline. Some will have revenue surpluses; others, budget deficits. There is no simple pattern. Second, there currently is rapid expansion of categorical instruction programs (particularly classes for the handicapped) for which reliable expenditure data are hard to obtain. A third difficulty is that certain costs may change quickly, as did fuel costs recently.

Across the past ten years the national average annual increase in public school system expenditures has been about 10.8% (if inflation is taken into consideration, the annual increase would average only about 4.5%). However, average annual growth in the 1970's has been less (9.7%) than it was during the last half of the 1960's (11.8%). Two factors may account for this decrease: total national enrollment began to decline after 1971, and fiscal problems became worse after

1972. It is not clear how significant either of these factors will be in the future. Nonetheless, even if annual expenditure growth continues only at the 9.7% rate, total public school system expenditures will increase around $7 billion annually in the late 1970's and around $8 billion annually in the early 1980's.

3. Inadequate Cost Data

The words "costs" and "expenditures" often are used interchangeably in school finance. This causes confusion. Costs refer to the price of educational inputs; expenditures refer to the money spent. When costs increase, expenditures may not: the money may simply buy fewer or inferior inputs. Similarly, when expenditures increase, costs may not: the money may buy more or superior inputs.

One cannot accurately compare school districts' costs simply by comparing their expenditures. To begin with, local educational agencies follow different budget and accounting practices. "Instruction" expenditures may include principals' or department heads' salaries in one place but not another. Percentage markups for overhead and other indirect costs vary. Second, there may be substitution among budget categories. The actual effect of a dollar increase in one category may only be to increase the real resources available in another. Hiring a paraprofessional may free an experienced, well-trained teacher for more difficult work. Finally, even if budget data were reliable, it would be hard to compare costs because there are not standardized measures of educational inputs. What is taught as Introductory French in one course may include much more than what is taught in another. Two teachers each earning $12,000 may have greatly different skills.

Only when aggregate cost differentials are substantial, as in the case of urban school districts, is it possible to know where school system costs are higher or lower. But even if aggregate costs are greater somewhere, the cost of some particular program or service may not be. Assumptions about relative costs must be made with great care.

4. Does Money Matter?

Some people question whether increased expenditures actually make much difference in the quality of education. Their skepticism is based upon two lines of argument. First, a number of recent studies conclude that factors unrelated to school quality such as family background and I.Q. are much more important for explaining variations in student achievement. Second, it is claimed that local educational agencies often spend most additional money they receive making teacher salaries higher and class sizes smaller, neither of which clearly and dependably affects how much students learn. Increased expenditures may only raise the cost of educational inputs, not their quality.

Undoubtedly, minor increases in expenditures make little differences in the quality of schooling. That a district is able to spend $10, $20 or even $50 more per student is not likely to be significant. On the other hand, if a district continually fails to increase expenditures, then inflation will eventually undermine its programs. Effects might not be noticeable the first year, but after several years they will be.

Moreover, while additional spending in general may not be related to student achievement, there is some evidence it can be important when the money is spent in certain ways. For example, some studies show that certain students perform significantly better on tests when they are taught by well-trained, experienced teachers. Similarly, it has been shown that certain students may benefit more than others from special classes and programs. Increasing expenditures thus may be necessary but not sufficient for improving the quality of education: much depends upon precisely what is done with the money.

Finally, increasing expenditures may make schools better in ways that do not get reflected in how much students learn. Schools with more money can offer a wider variety of courses. They can have more extra-curricular activities. They can provide better counseling and help for those with physical and emotional problems. If nothing else, more money can help make schools pleasant places in which to work.

Policy Options

Four policy options are discussed in the following pages: removing barriers to equalization in Federal aid programs, subsidizing State equalization efforts, subsidizing property tax relief, and providing grants for urban education. Arguments which might be made for and against each one are presented, as are suggestions on how each might be enacted. It should be emphasized that these four policy options are not the only ones which could be suggested. There are a number of others which would serve as well to illustrate the complexity of the developing issues.

It should also be emphasized that maintaining Federal legislation as it currently is merits consideration as a policy option. However, rather than being presented as such, which would become redundant, current legislation is used throughout this section as a benchmark against which the four other options are compared. An argument against one of the options becomes in effect an argument for maintaining the legislation as it now is.

1. Remove Barriers to Equalization in Federal Aid Programs

Federal aid creates a dilemma for a State attempting to bring about fiscal equalization among local school districts. On the one hand, if the State ignores Federal allocations to local districts when it calculates how much State aid they should receive, then Federal aid results in some districts getting more total money than they qualify for under the State's equalization standard. On the other hand, if the State tries to consider Federal money as locally raised revenue, then Federal law generally prohibits it or any of its local education agencies from receiving Federal funds (the purpose of this restriction is to prevent fiscal substitution; that is, to ensure that States do not reduce their own contribution to local schools because Federal money is available). The State is forced to choose between taking Federal money but undermining equalization, or having equalization and losing Federal money.

It was this dilemma which a provision of the Education Amendments of 1974, described above on page 9, was designed to solve with respect to impact aid. The provision may not work when it becomes effective on July 1, 1977. Most of the States with fiscal equalization programs apparently will not be sufficiently equalized to take a portion of impact aid into consideration when calculating State aid to local school districts. Those States which have tried to equalize expenditures among local districts will generally have disparities which exceed the maximum allowable disparity established by Office of Education regulations.

Those States which have tried to establish a "fiscally neutral" system of school finance (in which revenue-raising capacity is equalized, but not necessarily expenditures) will also have a disparity greater than permitted. There is even some question whether the regulations for fiscally neutral systems are consistent with the statute as it is worded.

Several approaches might be taken to this problem. First, the statute and regulations could be left as they are in the hope that the present maximum allowable disparity among local school districts would be an incentive for States to equalize expenditures more than they have. For States which receive large impact aid payments this might have some effect. On the other hand, until States do qualify, what impact aid money they receive would continue to be disequalizing. Some local educational agencies in these States would continue to have more total money than they qualify for under their States' equalization standard.

Second, under P.L. 874, a State which has a plan for equalizing expenditures may take into consideration impact aid payments to local educational agencies only in the same proportion that local revenues are included under that State plan. If two-thirds of a district's local revenue is included in the States' equalization plan, then the State may consider as locally raised revenue only two-thirds of the impact aid money the district receives. In effect, the statute has a double test for equalization: a qualifying test with an either-or standard (the maximum allowable disparities described in the second preceding paragraph above), and a measurement test with a sliding scale (the proportion of locally-raised revenue under equalization). If the latter test is adequate, or could be made so, the former test is unnecessary. Devising an acceptable measurement test which could stand by itself would go far towards resolving the dilemma.

The principal advantage of this last approach is that it makes it unnecessary for the Federal government to decide what is an acceptable standard of equalization and to judge whether States measure up to it. It avoids difficult political and philosophical questions about what public school finance systems should do. It does not encourage States to equalize, but neither does it penalize those that try. The objection to the approach would be that only State governments would benefit from relaxing the prohibition against taking impact aid payments into consideration. Local school districts would get no additional funds, but the States could save money by reducing their payments to them. Some local districts might even be hurt if they lost more in State aid then they now get in impact funds. Perhaps the States could be required to pass along any savings they get to the local districts.

Equalization raises an even more complicated issue with other Federal education programs. The rationale for permitting States to take impact aid into consideration is that it is a substitute for locally-raised tax revenue. It may be used for any current expenditure. However, other Federal funds are for categorical programs: they may be used only for certain kinds of expenditures. It can be argued that high wealth districts need Federal categorical money as much as low wealth districts, for otherwise they would not provide the programs or services that categorical money supports. Normal operating expenses, while high per student, leave them little financial leeway. On the other hand, it can also be argued that wealthy districts could pay for such programs or services by reducing what they spend for regular instruction. Poor districts cannot do this. The issue comes down to a choice between having Federal education programs in a large number of districts, the wealthy as well as the poor, or limiting Federal categorical aid just to low wealth districts.

This question of choice might be resolved different ways for each program. One factor to be considered is whether States or local educational agencies might continue a program even if Federal funding were terminated. Another is whether the amount of Federal money is large enough to cause a serious problem with equalization. Here are a number of legislative options that might be considered:

1. Abolish the prohibition against fiscal substitution for States with fiscal equalization (or permit a portion of Federal money to be supplanted, as with impact aid)
2. Permit fiscal substitution, but only when certain service standards are met (as under the Education of All Handicapped Children Act)
3. Require the Commissioner of Education and the State educational agencies to demonstrate that their intrastate allocations of Federal categorical aid take fiscal capacity into consideration (as is the case under Part B of Title IV ESEA and Part A of Title I of the Vocational Education Act) or are otherwise not disequalizing.
4. Scale local educational agency grants to some measure of school district expenditures, wealth, or effort.

2. Subsidize State Equalization Efforts

Three arguments are made for why the Federal government ought to subsidize the costs of school finance reform. First, the cost of fiscal equalization is said to be too high for most States to meet. States invariably choose to equalize by "leveling up" the revenue capacity or expenditures of poor districts, not "leveling down" the expenditures of wealthy districts. Disparities get reduced by money being put into districts below some standard, not by redistributing funds already being spent. As a consequence, substantial revenue is required: in New Jersey, equalization will cost $600 million the first year; in California, it may cost over $1.1 billion annually by 1981. If States had the budget surpluses they had in 1973 (when most reform occurred), there might be no need for Federal funds. However, few States will have such leeway in the forseeable future; indeed, most northern and central industrial States will be struggling to avoid deficits.

Second, it is claimed that States need an incentive to undertake reform. Fiscal equalization is not an intrinsically popular issue. It is difficult to understand and hard to convince people they will benefit. The tax reduction component of reform is popular, of course, but while some people would pay lower total taxes, under the "leveling up" approach a majority will pay more. Federal money might make the difference.

Finally, it is argued that the Federal government ought to subsidize school finance reform to affirm its commitment to equality of educational opportunity. There is little point in trying to reduce financial and cultural barriers to quality education, so it is said, unless the fiscal inequalities common in elementary and seconday education are overcome first.

On the other hand, if it is difficult for States to finance the cost of equalization, it will be no less difficult for the Federal government. While the total cost of subsidizing equalization in all States depends upon the particular plan each enacts, the sum undoubtedly would be considerable. Simply bringing all local school districts up to the median district's average per pupil expenditure in their respective States woöld cost about $3 billion each year. Providing tax relief as well, which may be unavoidable to create spending equity, would raise the cost perhaps another billion. To fund fully some bills introduced in Congress for equalization could cost $25 billion annually. Many people doubt whether money for any of these sums will be available in the near future.

Even if sufficient appropriations were forthcoming, other objections to subsidizing equalization would be made. If Federal money were given to States already reformed, it would be difficuilt, if not inequitable, to prevent them from using funds simply to supplant State and local money. Alternatively, if money went only to States yet to reform, it would reward them for having postponed change.

Another problem is whether States should be required to legislate revenue or expenditure controls as a condition of receiving Federal funds. Without them, present disparities might reappear. Yet to require them might be viewed by many people as an unwarrented intrusion into State and local affairs.

Consider the problem of interstate disparities. If substantial Federal funds became available, it would be argued that differences among the States (which often exceed differences within them) should be reduced as well. How could the logic of a Federal equalization program stop at a State boundary line? Yet the difficulties of trying to equalize school financing among States would dwarf all the others mentioned so far.

Perhaps the most difficult legislative problem is what standard of equalization States would have to meet to qualify for Federal funds. Would only finance programs designed to equalize expenditures be acceptable, or could fiscally neutral programs qualify too? How much equalization would be necessary? What exceptions would be permitted? It has been hard for State legislatures to grapple with these issues: it will be no easier for the Congress.

Nonetheless, if a subsidy is to be provided, here are ways it might be done:

1. Provide a short-term annual grant (perhaps for three years) to help States meet the initial costs of equalization
2. Give States grants for increasing the percentage of funds from State sources which have the effect of equalizing expenditures or fiscal capacity
3. Amend the large Federal grant programs to provide more money to States with fiscal equalization

3. Subsidize Property Tax Relief

Property tax relief is integrally connected with school finance reform. Some fiscal equalization plans have significantly reduced local property taxes, partly by lowering tax rates in low wealth districts where they had been inequitably high and partly by raising a larger proportion of revenue at the State level. If the Federal government were to subsidize fiscal equalization directly, it almost certainly would provide some property tax relief.

However, certain people advocate that the Federal government ought to make property tax relief the principal goal of school finance subsidies (sometimes fiscal equalization is not even made a condition). They give three arguments. First, they claim that property taxes are too high throughout the country, and that not just the elderly or low income people need relief. Since public schools get more than half of all property tax revenue collected, it is logical to reduce tax rates by subsidizing public education. Second, they argue that the property tax is a bad tax. They claim that it is regressive (that is, that it consumes a larger proportion of the income of low-income than high income people), that it treats different kinds of property unequally, and that it is expensive to collect. Some believe that high property tax rates contribute to economic decline. Finally, it is argued that schools need a source of revenue that expands more rapidly.

However, like school finance reform, property tax relief can be expensive. Simply to reduce school property taxes by a third would probably cost $10 billion a year. It seems unlikely that Federal appropriations for more than a symbolic reduction would be available in the near future.

Even if money were available, proposals to subsidize property tax relief present other problems. Some people would object to using

Federal "education money" to reduce taxes. Some would argue that property taxes are indispensable to local control of public education. Perhaps more important, it is not clear how money for property tax relief could be equitably distributed. Would local educational agencies with low rates be given the same subsidy as those with high rates? Would differences in tax effort be taken into consideration? How would local educational agencies without taxing power be treated? Would improved assessment practices be a condition for a State to participate?

Finally, property tax relief may create serious equity problems. Owners of property might receive a windfall from the reduction. When they purchased property they presumably expected to pay at least a certain amount of taxes on it; if a subsidy were given, not only would they be able to pay less taxes, but the market value of their property would increase. Moreover, while it is commonly assumed that property taxes are regressive, a number of economists have recently been arguing that this may not be the case. Instead of being borne by renters and other users of property, the tax may be borne by owners of capital, who in general have high incomes. To the extent that either of these arguments is true, substituting Federal revenue for local property tax revenue might be regressive.

Here are some legislative options which might be considered for reducing property taxes:

1. Abolish maintenance-of-effort requirements and rules against supplanting local funds with Federal dollars

2. Provide short-term annual grants (perhaps for three years) to help States shift from property taxes to income or other taxes

3. Give States grants for aid programs, not financed through property taxes, which reduce the proportion of school revenue that must be raised locally

4. Amend the large Federal education grant programs to provide more money to States and local educational agencies that reduce property taxes

4. Provide Special Grants for Urban Education

There are two arguments to be made for why the Federal government ought to provide special subsidies for city school districts. First, as described above, city school districts have fiscal problems. While they generally have more revenue per student than other districts, they also have higher costs. More important, many city school districts cannot readily obtain additional local revenue to meet rising costs. Not only are their tax bases growing slowly, but the revenue they produce must also be used for rapidly increasing municipal expenditures. Tax rates are already high. In short, city school districts lack fiscal leeway: if costs rise or if State or Federal aid declines, programs and services have to be cut. These fiscal problems will not be temporary: costs have been increasing more rapidly than sources of revenue for some time, and indications are they will continue to do so in the future.

The other argument for special subsidies to city school districts is that a higher percentage of their students need special educational assistance. In urban areas more students are black, Hispanic, or belong to some other ethnic or minority group; more come from homes where English is not the first language; and, most important, more are members of families that are poor. To achieve as well in school as other children, these students need additional classes, special programs, teachers with different training, and more comprehensive supplementary services. While there already are Federal and State programs which provide funds for these purposes, it is argued that the money is not sufficient. The cost of adequate urban schooling in urban areas exceeds the revenue available.

However, many objections would be raised about a proposal that the Federal government provide special subsidies for city school districts. First of all, the cost of providing effective subsidies would be substantial. There are approximately 6,250,000 public elementary and secondary school students in the 50 largest cities alone (roughly those with populations greater than 300,000). If the Federal government were to provide an annual subsidy of $100 for each of these students, it would cost $625 million. To include smaller cities -- which may be necessary so each State would receive some money -- would greatly increase the cost. Moreover, it is not clear that $100 per student would make much difference: in nearly all cities, this would permit an increase in expenditures of less than 7%; in some, it would permit an increase of less than 4%.

For whatever money was made available, something would have to be done to ensure it would improve the quality of education. Given how little leeway city school districts have in their operating budgets, money from a Federal subsidy might easily be consumed by current expenditures. Moreover, the subsidy might simply stimulate an increase in the cost of existing educational inputs. Teachers who recently have been receiving only small pay increases would surely attempt to have the money allocated for their salaries.

Perhaps the strongest objection which would be made is that it is not clear why city school districts per se should receive a special subsidy. While a number of cities have serious fiscal problems, many do not. Large cities, particularly those in the Northeast, seem to be in the worst straits, but many smaller cities apparently do not have unusual need. Should all cities nonetheless receive the subsidy? How could it equitably be determined which ones merit special funds and which ones do not? Moreover, some school districts outside of cities have fiscal problems as well. There is less publicity about them, but the dilemmas they face are similar. Should they be prohibited from receiving additional money? In short, a subsidy just to urban school districts may not be an efficient way to help with the problems being talked about.

Nonetheless, if a a special Federal subsidy for urban school districts is to be provided, here are ways it might be done:

1. Reauthorize and expand Part C of Title I ESEA
2. Modify the Title I ESEA allocation formula (count AFDC children fully; use the per pupil expenditure of each local educational agency, not the State average build in a population density factor, etc.)
3. Give grants to States to match State aid which is specially targeted to urban areas
4. Provide grants to local school districts where municipal expenditures consume a high proportion of local tax revenue

Educational Achievement

Concern about educational achievement goes back far in American history. During the common school movement in the mid-nineteenth century, controversies over what children are able to learn were frequent. At the turn of the century, there was much fear that children of migrants would lower academic standards. In the 1950's attention focused on how well scientists and mathematicians were being trained, while in the 1960's it focused on how children from low-income families could overcome educational disadvantages. Today two issues are emerging: declining academic achievement and inadequate minimum performance standards.

The Issues

1. Declining Academic Achievement

Much publicity has been giving to the decline in Scholastic Aptitude Test (SAT) scores. For the past decade, the national average score for the verbal aptitude tests has fallen each year; the score for the mathematics aptitude test has fallen in all but one year. In the 1970's, similar drops have been registered in the scores of the comparable tests administered by the American College Testing Program (ACT). To many people, this trends indicates that academic achievement in American elementary and secondary schools is declining.

Whether such a conclusion can be drawn from these tests is debatable. Neither the SAT nor the ACT is designed to measure achievement; neither is taken by a representative group of American high school students. However, other tests often reveal falling scores as well. For example, the most recent science test administered by the National Assessment of Education Progress (NAEP) shows significant declines in achievement for all three age groups tested. Scores have also been going down on another widely-given examination, the Iowa Test of Basic Skills. While the scores of some tests are rising, a recent comprehensive study concludes that the general pattern of test results is downward.

Of course, standardized tests may be good measures of the overall level of achievement in elementary and secondary schools. Such tests focus only on certain kinds of knowledge and a limited range of skills. Teachers often emphasize different things. It is possible for students to be learning more than before yet to be doing worse on tests designed for nationwide use.

Nonetheless, even if academic achievement in elementary and secondary schools is not actually declining, it still may be too low. Complaints by college teachers that incoming students cannot read or write well are legion. Many colleges find it necessary to offer if not require remedial classes. City University of New York alone spends $35 million a year on such courses.

Similarly, comparisons of the academic performance of final year secondary school students in Europe and the United States often show American students doing poorly. On a reading comprehension test administered by the International Association for the Evaluation of Education Achievement (IEA), students in the United States scored lower than students in four countries (averaging 40% correct as opposed to 62% for English students). On the science test, they scored lower than students in seven countries. Obviously the low American scores can partly be attributed to the fact that a greater proportion of children attain the final year of secondary school here than in other countries. Talented students in the United States might do as well as talented students elsewhere. Nontheless, the contrast in performance suggests that the general level of academic achievement in American schools may be inadequate.

Regardless of whether achievement is actually declining or too low, many people think it is. A recent Gallop Poll estimated that 59% of American adults believe that the quality of education in the United States is declining. Most blamed parents for the trends in test scores, though television and permissiveness were cited as well. The schools were also criticized: it was claimed that students are not motivated to do well and that teachers today pay less attention to them.

These are old complaints. Their validity can be questioned. However, until there is demonstrable evidence that academic achievement is not declining, this issue is certain to persist.

2. Inadequate Minimum Standards

Like the first issue, this concerns educational achievement in elementary and secondary schools. Unlike the first, however, this is not about how much students are actually learning; rather, it is about what schools require them to learn. Today schools are criticized for not expecting enough of students.

There is no agreement on how much students ought to know. There are not even good data on what they do know. But some evidence indicates that students can graduate from high school in the United States without being required to obtain the knowledge or skills that many people believe it is necessary for them to have. For example, reading generally is considered to be one of the "basic" skills. Yet in New York City public schools, only an eighth-grade level of competency is formally required for graduation. Even this standard is not honored in practice (not all City University of New York freshmen can read at this level). Court suits have been filed elsewhere on behalf of high school graduates who can read only as well as fourth grade students.

Knowledge of government is also generally considered important. Yet a NAEP exam last year revealed that schools may not be demanding enough of students who soon will be eligible to vote. Nearly half of all 17-year olds do not know that each State has two U.S. senators. Over a third think the President can appoint people to Congress.

According to the Office of Education, there are more than 60 million adults who lack educational skills needed to be proficient in everyday life. A third of them are functionally illiterate, that is, they cannot read well enough to understand recipes or newspaper ads, let alone rental agreements or tax forms. Some of these people undoubtedly never completed high school. But many of them are graduates who were given diplomas even though they did not have the knowledge and skills they need.

In response to these problems, several States now are requiring all students to pass minimum competency tests before graduating These tests ostensibly measure proficiency in subjects such as reading and mathematics; sometimes, they also attempt to measure general skills like problem solving. Minimum competency tests have received much publicity, and bills are being introduced in many State legislatures to require them.

However, these tests may only intensify the present debate over academic standards. Minimum competency tests only identify who has the requisite knowledge and skills; they do not themselves provide ways of bringing students up to that standard. Moreover, minimum competency tests raise interesting questions. What if a student repeatedly fails his graduation test? Would he have a right to whatever remedial services he needs to pass? What if a talented student can pass his test in the eighth grade? Would he be able to skip high school? Concern about inadequate academic standards eventually leads to more complicated problems than whether minimum competency tests are desirable (see the discussion of the first policy option in this section).

Background

1. Previous Federal Action

Much Federal education legislation is aimed at improving educational achievement in elementary and secondary schools. However, there are two major acts which deal directly with the kinds of problems discussed above. The National Defense Education Act of 1958 provides money for strengthening instruction in science, mathematics, modern foreign languages, and other critical subjects (Title III). It also provides money for testing, guidance and counseling, and identifying and encouraging able students (Title V). Authorization for funding the programs included under these titles is now found in Title IV of the Elementary and Secondary Education Act.

The Elementary and Secondary Education Act of 1965 contains two other titles directly affecting educational achievement. Title I authorizes financial assistance to local educational agencies with concentrations of children from low-income families for programs to help educationally deprived children. Title III provides money for testing, guidance and counseling, and supplementary educational centers and services. Authorization for funding Title III programs also is now included in Title IV.

2. Inadequate Comparative Test Data

Many people believe that the fall in SAT and ACT scores is evidence that educational achievement in elementary and secondary schools is declining. As mentioned above, however, this trend can at best be only suggestive. Not only are these tests not designed to measure achievement (their sole purpose is to predict aptitude for college work), but they are not taken by a representative group of high school students. In fact, neither test is taken by a representative group of college applicants.

Are there any tests which do permit one to measure trends in educational achievement? The only national examinations which might be used for this purpose are the tests administered by the National Assessment of Educational Progress. Every three or four years NAEP gives representative groups of children of certain age levels examinations in mathematics, reading, writing, science, etc. The tests are designed so scores can be compared across time. However, only a few NAEP tests have been given so far. Moreover, while separate NAEP scores can be obtained by sex, race, region of the country, and rural or urban place of residence, the tests are deliberately constructed so they cannot be obtained by State or by local school district. Consequently it is difficult to match changes in scores with changes in the schools. Only broad trends can be measured.

to appeal? Would scores be made public? Some peopde would charge that the test would lead to Federal control of education.

A nationwide examination would raise difficult practical problems as well. To be fair, such a test would have to measure how well students perform in the subjects they were taught. But schools teach different subjects. Even when the subjects are identical, schools do not teach them the same way. Different material is covered, different points are stressed. The goals and standards of one community (and often one school) are not necessarily those of others.

Without consensus on goals and standards, a nationwide examination for graduation would be inequitable. If one were nonetheless instituted, it probably would create more standardization in school curricula. Some people argue that any national attempt to raise educational achievement may have the same result.

Policy Options

Three policy options are discussed in the following pages: subsidizing minimum competency testing, requiring performance goals, and subsidizing academic incentive programs. Arguments which might be made both for and against each one are presented, as are suggestions on how each might be enacted. As was stated in the school finance section, it should be emphasized that these policy options are not the only ones which could be suggested. There are others which would serve as well to illustrate the complexity of the developing issues.

It should also be emphasized again that maintaining Federal legislation as it currently is merits consideration as a policy option. Rather than being presented as such, current legislation is here used as a benchmark against which the three other options are compared. An argument against one of these options in effect becomes an argument for maintaining the legislation as it now is.

1. Subsidize Minimum Competency Testing

The great interest today in minimum competency tests stems from the belief they can help raise academic standards and increase educational achievement. If passing a minimum competency test were required for graduation, it would perhaps make diplomas more meaningful, assure people that graduates have obtained at least a minimum level of useful knowledge and skills, and enable policy makers to identify schools where students need additional help.

If minimum competency tests were given only to determine who should graduate, there would be no need for the Federal government to become involved. Decisions about whether to have them could be left to the States; the cost of preparing and administering them would be modest.

But minimum competency testing raises broader issues for which it could be argued the Federal government has a role to play. For one thing, to prevent students from unexpectedly failing graduation test in their senior year, they need to be given competency tests in the other grades as well. Learning problems must be identified earlier; appropriate counseling must be provided sooner. Such a series of tests and evaluations of students' needs would be more costly.

Moreover, what is to be done with students who repeatedly fail their competency exams? If the tests are not a whitewash, some will have great difficulty passing. Yet if the goal of testing is not simply to identify who can pass having had regular classwork, but instead is to help all students obtain at least certain knowledge and skills, then special instruction will be needed. The logic behind minimum competency examinations leads to a large scale compensatory education program.

Such a prospect is certain to stir opposition. Allocating funds for compensatory education on the basis of test scores would result in a different distribution of funds than under the present Title I formula (though the current allotments might be revised anyway to reflect changes in the incidence of poverty throughout the country). Moreover, it raises what may be an insoluble dilemma: if a school district improves student performance so no one fails the competency test, would it lose its funds? If student performance did not improve, or if it declined, would the district continue to receive the funds? Would it not need additional funds?

There are other problems to be faced. Some students may never pass, no matter how much assistance they get. Should they be denied a diploma? Some students might be able to pass long before their senior year. Should they be forced to remain in school? Some students may excel in certain skills but fail in others. Should different tests be given to reflect different talents and interests?

Perhaps the most difficult legislative question is who should design the tests and set the standards. If each local educational agency were given this responsibility, tests presumably would reflect the divergent educational goals in different communities. But standards might be kept low: parents do not want their children to fail; teachers do not want to be criticized. On the other hand, if the State educational agencies were given the responsibility, they might use inequitable goals and standards. They might require tests which favor the education offered in just certain communities. Experience in some States with mandatory Statewide testing programs shows that the political maneuvering behind test design can be intense.

What role would the Office of Education play? Would it simply allocate money for the tests, or would it have to assess their adequacy? The former alternative might result in the Federal government paying for tests which were weak, while the latter might raise sensitive issues of curriculum control.

Nonetheless, if Federal government were to subsidize minimum competency testing, here are ways it might be done:

1. Give one-time grants to help States overcome the initial costs of setting up a system of tests
2. Expand the authorizations in Title IV ESEA to cover the additional annual costs of the tests
3. Allow States to use minimum competency testing in Title I ESEA programs

2. Require Performance Goals

Few education programs have goals of measurable educational achievement. This does not mean they lack objectives. They may have general ends which the teacher tries to attain (such as mastering long division). They may have plans to be followed (such as proceeding through a textbook). Or they may have operating principles to be implemented (such as encouraging experimentation). But precise, measurable achievement goals are rare.

There are many reasons why most courses do not have such performance goals. Suitable tests might not be available. Even if they were they might not be easily administered or scored. Expressing goals in terms of test scores can seem arbitrary and artificial. Precise goals permit invidious comparisons among teachers. If goals are not met, administrators or parents may be critical.

Nonetheless, a number of arguments can be made for establishing measurable achievement goals for some programs. First, such goals would encourage teachers to emphasize demonstrable educational achievement as one of their objectives. This would not be appropriate for all courses, but it might be for such subjects as reading or or mathematics. It might be especially appropriate for courses designed to overcome educational deprivation.

Second, performance goals would enable people to measure what progress has been made in courses. They would help pinpoint problems to be worked on.

Finally, performance goals would stimulate educators to improve their programs. Lack of demonstrable progress would have to be explained; suggestions for changes would have to be made. Measurable achievement goals might be particularly valuable in helping educators design new courses and services in schools whose the social background of the student body is changing.

On the other hand, requiring performance goals would raise some difficult problems. As with minimum competency tests, there is the question of who should determine the skills to be measured and the level of achievement to be sought. If teachers were responsible, they might set goals too low so their students could meet them without difficulty. Alternatively, if administrators or parents were responsible, they might set goals unrealistically high. Striking the right balance would not be easy.

Second, it is not clear what failure to attain the goals would imply. Educators might not think their teaching methods or plans were at fault. Instead, they might claim the goals were set too high. They might argue they need additional resources. They might claim parents were not supporting their work.

Finally, some people would object that performance goals will distort school curricula. Educators would "teach to the test," emphasizing only those skills which were to be measured. Also, worthwhile goals that conflict with performance goals might be considered objectionable. The complexity of the learning process would be overlooked.

However, given the widespread concern about academic achievement and minimum standards, it might be appropriate for the Federal government to encourage the use of performance goals. This might be done in some of the following ways:

1. Give grants to States for using such goals in regular school programs
2. Amend Title I ESEA to encourage (or perhaps require) performance goals
3. Support experimental programs to develop ways performance goals could be implemented

3. Subsidize Academic Incentive Programs

The previous policy options aimed at raising academic standards and improving educational achievement by identifying students and courses with shortcomings. Perhaps the same goal could instead be met by encouraging higher quality academic work. Supporting academic incentive programs would be one way of doing this.

Academic incentive programs could encompass a wide variety of options. At one extreme they simply might entail more individualized instruction so students can regularly advance at their own pace. Schools might also organize special projects or have special trips for students who do excellent work. Summer instruction might be provided. At the other extreme, academic incentive programs might include a number of formally recognized advanced courses at each grade level. High school students could be permitted to enroll in postsecondary institutions for some for their work. They might even be given the opportunity to participate in activities organized by State educational agencies or perhaps some Federal agency. Whatever the option, additional funding would be needed if it is to be offered on a widespread basis.

Essentially three arguments can be made for such programs. First, it can be claimed that academic excellence is not valued as much as it should be. After a decade in which most attention has been focused on problems of educational deprivation and lack of freedom and diversity, it may be time to re-emphasize the importance of high standards.

Second, it can be argued that special programs are needed to improve the schoolwork of average children. It is not just low achievers nor the gifted and talented who need help. Ways must be found to raise the aspirations and expectations of those who constitute the majority of students.

Finally, encouraging academic incentive programs may be one way of strengthening high schools. Over the past five years a number of studies have been done about the problems of American secondary education. Although their recommendations vary, most of the reports conclude that high schools today neither challenge students sufficiently nor use their time efficiently. They have conflicting purposes and no clearly defined goals. Incentives to raise educational achievement might provide the structure and discipline many students need.

On the other hand, two lines of arguments could be made against recommendations for academic incentive programs. First, it is not clear precisely what curriculum changes could be made without overemphasizing academic competition. Many people believe American children are already subject to too much pressure succeed. Incentives to raise the level of educational achievement, they feel, might only make student more anxious and conformist than they now are.

Second, academic incentive programs might encourage more tracking in American education. While children from all backgrounds might benefit from such programs, by and large students from middle class families are likely to do best in them. Definitions and standards of what is called "academic merit" in the United States seem to be inextricably linked to the cultural values of that particular class.

Nonetheless, if it is considered appropriate for the Federal government to encourage academic incentive programs in elementary and secondary schools, here are ways it might be done:

1. Amend Title IV ESEA to permit money to be spent for academic incentive programs
2. Give entitlements to local educational agencies (perhaps on the basis of enrollment size) which establish academic incentive programs
3. Establish national merit programs (special courses, camps, or trips) for students who demonstrate high levels of achievement

Racial Segregation

No subject has caused so much controvery over the public schools as racial segregation. Since the U.S. Supreme Court's decision in Brown v. Board of Education in 1954 there have been struggles in countless communities over whether public schools were segregated, whether government policies were responsible, and whether students should be bused to bring about integration. Initially most desegregation activity occurred in southern and border States, but increasingly it has involved communities in the North and Southwest as well. Today two issues are causing growing concern: racial concentrations within large cities, and racial concentrations within metropolitan areas. Obviously these issues are closely related to one another, but each raises different problems and presents different dilemmas for public policy.

The Issues

1. Racial Concentrations within Large Cities

In the last twenty-five years there has been rapid growth of racial minorities living in urban areas in the United States. In 1950, 9,983,000 blacks and other racial minorities (61.7 percent of the total) resided in urban areas; in 1970, 20,552,000 (80.7 percent of the total) did. Most of this growth has occurred in large cities. Today racial minorities constitute about 25 percent of the total population of all cities of 50,000 or more. They are a much larger proportion in most of the major cities; they are a majority in Atlanta, Newark, and Washington, D.C.

As the racial minority population of cities has grown, so has the racial minority enrollment in city schools. Although recent enrollment data are difficult to obtain, it appears that in about half of the largest cities in the country today a majority of public school students are black or some other racial minority. The minority enrollment of New York and Philadelphia is greater than 60 percent; the minority enrollment of Chicago and Detroit exceeds 70 percent. In Atlanta, and Wilmington it is over 80 percent, and in Washington, D.C. it is over 95 percent.

There has also been increasing racial concentrations within central cities. The proportion of blacks concentrated in neighborhoods that are largely black has grown steadily; the proportion in neighborhoods that are largely white has declined. In all cities with a black population greater than 50,000 a majority of blacks now live in predominantly black census tract areas. In Chicago, three out of four blacks live in census tract areas which are 90 percent or more black. Similar concentrations are observable in large cities for persons of Puerto Rican origin.

Since public schools in the United States generally are organized on the basis of neighborhoods, racial concentrations in housing typically result in racial concentrations in education. In fact, since white residents of cities are less likely to have children of school age (or are more likely to send them to private schools), racial concentrations in schools often exceed those found in housing. In most cities today a majority of black public school students attend schools in which 50 percent or more of the students are black or some other racial minority. Relatively few black students attend city schools which are predominantly white. For example, according to Office of Civil Rights data for 1974, in New York City, where 38 percent of all students are black, only 15 percent of the black students attend schools which are predominantly white. In Cincinnati, where 51 percent of all students are black, only 13 percent of the black students attend predominantly white schools. And in Chicago, where 58 percent of the students are black, less than 2 percent attend predominantly white schools. Almost 80 percent of Chicago's black students attend schools which are 99 or 100 percent minority.

How long will these trends continue? Certainly residential concentration is now so common in American cities that basic demographic patterns are unlikely to change substantially in the near future. Even vigorous enforcement of fair housing laws is unlikely to make an appreciable difference soon.

Where governmental policy has been partly responsible for racial concentrations in the public schools, Federal courts may require disparities to be reduced. Such orders are common throughout the South, where schools at one time were segregated by State law. For example, in the Mecklenburg County-Charlotte City (N.C.) school district, where approximately one-third of the students are black, under a court-mandated pupil assignment plan 97 percent of the black students attend schools which are predominantly white.

Desegregation orders may also become common in the North and West. Court-mandated pupil assignment plans are now in operation in Boston, Detroit, Milwaukee, and some other cities. Orders for them have been issued (though not yet implemented) for Cleveland, Dayton, Indianapolis, and Los Angeles. Other court cases are pending, and undoubtedly more suits will be filed elsewhere.

However, recent decisions of the U.S. Supreme Court suggest that it might be more difficult in the future to prove that governmental policies have been responsible for racial concentrations. Plaintiffs may have to show that the policies were intended to create segregation; it may no longer be possible to judge them just by their effects. Moreover, it might be that the scope of the desegregation plans the courts require will be substantially curtailed. Instead of having remedies reduce racial disparities throughout a district, perhaps courts will have them deal only with those schools directly affected by governmental action. Still a third possibility suggested by a recent ruling is that courts may not necessarily require local educational agencies to continually reduce racial disparities once they have adopted a racially neutral student assignment system.

Substantial reductions in racial concentrations are also unlikely to occur under Title VI of the Civil Rights Act of 1964. In the mid-1960's this Act was responsible for bringing about much of the desegregation in the South. However, today Federal officials are limited in the extent to which they can require school districts to integrate as proof that they are not discriminating. They have virtually no power at all to require districts to bus students.

Many people argue that where there is no legal necessity to desegregate schools, the Federal government should do nothing to reduce racial concentrations. According to some, minority concentrations per se do not create educational problems; on the contrary, they enable minority students to benefit from the advantages of culturally homogeneous schooling. Even if racial segregation does create problems, some people think it may not be possible for the Federal government, or perhaps any government, to do anything about them. For example, it might be that some large cities cannot be desegregated given the dwindling number of white students remaining in their public schools.

On the other hand, others argue that racial concentrations in the public schools, whether caused by governmental action or not, can be a serious problem. They claim that the adverse educational effects of minority group isolation can be as serious today as they were at the time of the Brown decision. Moreover, these effects may be compounded by the fact that today racial minorities are concentrated in districts with serious fiscal problems. To these people, new Federal policies are imperative.

The only thing which seems certain is that racial concentrations in large cities will continue to be as violatile an issue in the future as it has been in the past. If cities are required to desegregate, there will be controversy. If they are not required to desegregate, there still will be much debate over whether the concentrations ought to be reduced.

2. Racial Concentrations within Metropolican Areas

During the past twenty-five years there has been a dramatic increase in the number of racial minorities living in suburbs. In 1950, only 989,000 blacks and other racial minorities (6.1% of the total) resided in areas contiguous to cities of 50,000 inhabitants or more; by 1970, however, 3,120,000 (12.3% of the total) did. In most of the largest metropolitan areas, the black suburban population is growing at a faster rate than the white suburban population.

Not all suburbs are integrated. In fact, while racial concentration in suburban neighborhoods is not as pronounced as in city neighborhoods, it still is very common. In eleven metropolitan areas in 1970, a majority of the black suburban population lived in census tracts which were 50% or more black. In the Detroit area, almost half the suburban blacks lived in census tracts which were 90% or more black. For many minority people, the suburb is simply an extension of the urban ghetto.

Some suburban public school districts have had as serious problems of racial concentration as urban school districts. While predominantly black schools are not common in the suburbs, they are not unusual. Courts have ordered several suburban districts to desegregate.

Despite the increase of blacks and other racial minorities in suburban areas, most continue to live in cities. In fact, while the rate of minority growth in suburbs exceeds the rate of minority growth in cities, minority residents of cities are still increasing more in absolute numbers. The overwhelming majority of black and other minority students is still found in city, not suburban schools. For example, in the Baltimore metropolitan area in 1974 133,850 of the 311,450 public school students were black (43%). However, only 4.5% of these black students attended schools in Baltimore county; the remainder attended city schools. While county schools were generally not segregated (only 6% of the county black enrollment was in a predominantly minority school), city schools were (94% of the city black enrollment was in a predominantly minority school). In the Baltimore area, as in other metropolitan areas, racial minorities are increasingly confined to segregated city schools while suburban schools are largely white.

This sharp contrast between city and suburbba schools is one reason there have been calls for metropolitan integration. This is already in effect in school districts which contain both the central city and the surrounding county (for example, in Nashville, Tennessee). Here there are no city-suburban legal boundary lines to be crossed. Where there are such lines, sometimes voluntary integration plans have been organized. The largest such plan is Boston's METCO program, under which approximately 30 predominantly white school districts each year enroll black students bused from Boston. Both the district and the students are free to withdraw if they choose. Smaller programs have been tried at one time or another in Hartford and New Haven, Connecticut, and in Washington, D.C.

In July, 1974 the U.S. Supreme Court overturned by a five-to-four vote a district court plan requiring cross-busing of Detroit public school students, most of whom were black, and students in 52 predominantly white suburbs. The Court did not rule out the possibility of metropolitan integration plans being required elsewhere. Instead, Chief Justice Burger's opinion argued that given the "deeply rooted" tradition of local control of the public schools, school district boundary lines could be set aside only when it is shown that

> ...racially discriminatory acts of the State or local school districts, or of a single school district, have been a substantial cause of inter-district segregation.

The only place where an involuntary metropolitan integration plan has been implemented where formerly there were separate school districts is in Louisville, Kentucky. Before a merger was ordered, Louisville schools were 52% black and the surrounding Jefferson County schools were 17% black. Some schools were virtually all white, while some were nearly all black. Now the black percentage at every school can be no less than 12% and no more than 40%. Federal district courts have ruled that metropolitan integration plans might be required for Cleveland, Indianapolis, and Wilmington.

Metropolitan integration is likely to be an issue wherever city schools are predominantly black and suburban schools are predominantly white. While the issue is certain to be controversial -- it involves more problems than intradistrict desegregation -- it is also likely to grow as the proportion of minority students in city schools increases. In a number of cities, that proportion is already so high that reducing minority concentrations will be impossible without the participation of suburban students.

Background

1. Previous Federal Action

The Federal courts have long played a leading role in resolving questions about racial segregation in the public schools. Although the number of cases is too great for all of the rulings to be summarized here, it is possible to mention some of the U.S. Supreme Court decisions considered to be most important. In Brown v. Board of Education (1954) the Supreme Court ruled that racial segregation in the public schools is unconstitutional. In the decision the following year which implemented that ruling, it held that progress toward racially nondiscriminatory public schools should proceed "with all deliberate speed" (the delay permitted by this standard was declared inapplicable after the 1969 decision of Alexander v. Holmes). In Green v. New Kent County (1968), the Court ruled that where dual school systems had been required by law, the State and the local educational agencies may be placed under an affirmative obligation to establish a unitary system. In Swann v. Charlotte-Mecklenburg Board of Education (1971) it held that while racial quotas within each school were not always necessary (and that some one-race schools may be permissible), busing could be used so long as it does not risk children's health or significantly affect their education. Finally, in Keyes v. School District (1973), the Court held that system-wide remedies may be required outside the South even though segregation caused by State action has been clearly identified only in certain schools. (See as well the brief discussion of recent Supreme Court cases above on pages 43-44).

Congress has passed a number of laws which affect racial segregation in the public schools. Title VI of the Civil Rights Act of 1964 prohibits discrimination in Federally-funded programs. Each agency or department (including the Office of Education) providing financial assistance must try to obtain voluntary compliance with this provision. If it fails, it may terminate funding.

The Equal Educational Opportunities Act of 1974 specifies discriminatory practices which are illegal. It provides a list of remedies, to be taken in order of priority, which can be sought or imposed by Federal officials. Federal judges are included among the officials so restricted, though the Act is not intended to modify their authority to enforce constitutional requirements. The Act also states that Federal officials cannot encourage or require transportation of students except under certain circumstances and that Federal funds may not be used to pay for such transportation (similar provisions about transportation are found in a number of other acts as well).

Two laws provide money to help with school desegregation. Title IV of the Civil Rights Act of 1964 gives funds to State and local educational agencies, to universities, and to nonprofit research organizations for providing technical assistance to school districts undergoing desegregation. For fiscal year 1977 $34,700,000 was appropriated for this purpose. The Emergency School Aid Act provides basic grants to local educational agencies to help them reduce or prevent segregation and discrimination or to help them overcome the educational disadvantages of minority group isolation. For fiscal year 1977 $137,600,000 was appropriated for these grants. ESAA also provides funds for a variety of special and pilot projects and for such activities as bilingual education, educational television, and evaluation. A total of $102,400,000 was appropriated for these purposes in fiscal year 1977.

2. Effects of Integration

Many people want a simple answer to the question of whether integration has any effects. No such answer exists. This is not because there have not been studies of what happens to students in desegregated schools; on the contrary, hundreds have been done. However, it is difficult to extract from this research conclusions which can be made about integration in general. Most studies have been done without adequate control groups; most do not measure effects beyond a single year. The studies look at different kinds of integration (voluntary as well as involuntary, etc.) in different kinds of settings (large cities as well as rural areas, etc.). They focus on different problems.

Nonetheless, one researcher who has attempted to compare integration studies carefully has concluded that "biracial schooling must be judged neither a demonstrated success nor a demonstrated failure" (Nancy St. John, School Desegregation: Outcomes for Children, p. 119). She found that in general integration has not closed the achievement gap between black and white children, though test scores for the former have sometimes risen. White achievement has remained unaffected in majority white schools; it has declined in majority black schools.

St. John also found that in the short run integration may have negative effects on the self-esteem of black students. In part this may be due to a reduction in aspirations which had been unrealistically high. In the long run studies show that integration may develop self-esteem, a sense of environmental control, and educational and vocational aspirations.

St. John found as well that in some integrated schools there is friendly interaction and mutual respect between black and white students. This seemed to be most often the case in the elementary grades. However, the immediate effect of integration on interracial attitudes is often negative.

Perhaps the most useful conclusion to be drawn from all the research which has been done is that the effect of integration depends to a great extent on how school officials implement it. If students are carefully placed, if the staff is carefully trained, and if parents are encouraged to become involved, the problems will be minimized and the educational gains maximized. If students are not well assigned, if the staff receives no training, and if parents do not participate, then chaos might result. Integration per se has few predictable effects: it is the manner in which it is brought about which appears to be critical.

3. White Flight

Do white students leave the public schools when they are desegregated? Some researchers believe that many do. Recently James S. Coleman, former director of the 1966 Equality of Educational Opportunity study, has written several recent papers which conclude that racial integration leads to an immediate, substantial loss of whites. The loss is greatest, he claims, in large cities, particularly those in the South. It is also likely to be greater where the proportion of black students is relatively high and where the nearby suburban schools are largely white.

A number of researchers challenge these findings. Some claim that Coleman has not studied enough cities to reach a general conclusion about the effects of integration; they also claim that most of the white population loss which he measured occurred in just a few large cities. More important, some researchers show that while whate loss may be high during the first year of desegregation, over time it diminishes. In cities, as in most communities, public opposition to desegregation gradually wanes.

The most serious criticism of the white flight theory is that white residents leave cities for reasons other than school desegregation. In fact, white migration to the suburbs started shortly after World War I, long before school integration became an issue. It has continued more or less constantly since. While school desegregation may briefly accelerate this trend, it apparently is not the basic cause of it.

Policy Options

The recommendation most commonly made by people opposed to racial segregation in the public schools is that the Federal government should vigorously enforce civil rights laws affecting education, employment, and housing. They also argue that the Attorney General should provide more assistance to litigants attempting to bring about integration. These proposals fall outside the scope of this report; instead, only two policy options which require legislation are discussed in the following pages: subsidizing voluntary integration and subsidizing alternatives to busing. As was done in the previous sections, arguments both for and against these options are presented, as are suggestions on how the options might en enacted.

It is worth repeating that the two policy options discussed are not the only ones which could be suggested or which could illustrate the complexity of the developing issues. It should also be emphasized again that maintaining Federal legislation as it currently is merits consideration as an option. As was done previously, however, current legislation is used throughout this section as a benchmark against which the other options are compared. An argument against one of the options becomes in effect an argument for maintaining the legislation as it now is.

1. Subsidize Voluntary Integration

Under the Emergency School Aid Act financial assistance is made available to local educational agencies for desegregating schools. Some money goes to districts implementing plans required by a court order or designed to meet the nondiscrimination requirements of the Civil Rights Act. Some money also goes to districts voluntarily attempting to reduce or prevent minority group segregation.

Proponents of voluntary integration claim that these ESAA provisions are inadequate. Part of the problem stems from the fact that the financial assistance is only temporary. Not only must local educational agencies apply every year for their grants, but they also have no guarantee that projects receiving ESAA money one year will be given money the next. They may suddently lose all funding. Planning is difficult.

More important, ESAA money is to be used only for helping schools adjust to desegregation. It is to be spent on solving problems resulting from the transition to integrated schooling, not on making improvements in the general quality of education. Consequently it can do little to ease community concern about what will happen to academic standards.

The former problem might be easily solved. ESAA grants could be made available for a two or three year period. Perhaps for large programs they could be phased out over an even longer period to allow local educational agencies time to arrange alternative financing. Of course, without additional appropriations fewer programs could be funded, but this trade-off might seem justified.

The latter problem, however, is not so simple. Financing improvements in the general quality of education would change the basic purpose of ESAA. New regulations would have to be written and new administrative procedures adopted. Perhaps it would be better to enact a new grant program for local educational agencies undergoing voluntary integration. Under either option, the amount of money provided might vary with the number or the proportion of minority students; it might also vary with the amount of integration achieved. In any case, to bring about improvements in the general quality of education would require substantial, long term grants.

Essentially four arguments can be made for this proposal. First, substantial, long-term grants would help school officials rally community support behind integration. They could claim not only that the planning and adjustment costs of desegregation would be paid for, but also that additional money would be available for other purposes. This argument might be especially important where the schools have fiscal problems.

Substantial, long-term grants might give school officials the resources necessary to make significant changes in the schools. If spent wisely, they might be sufficient to reassure parents that academic standards will be rising, not declining. They could help make integrated education itself more attractive.

Third, grants of this sort might encourage local educational agencies to cooperate in reducing minority segregation. They would be one of the few incentives for suburban school districts to consider exchanging students with central city school districts.

Finally, substantial long-term grants might permit the Federal government to promote racial desegregation without relying so much on the requirements found in civil rights laws. Undoubtedly, the safeguards found in the fourteenth amendment and Title VI will always be necessary. However, some argue that it might be desirable at this stage of history to put more emphasis upon voluntary compliance and less upon mandated plans which stir so much opposition. A carrot is needed as well as a stick.

The most obvious objection to having substantial, long-term grants to encourage voluntary integration is their cost. Although no precise estimate of what appropriations would be required is possible, presumably the total sum would be sizable. Local educational agencies are unlikely to develop desegregation plans on their own unless they receive ample funds. The risks would otherwise be too great; the opposition, too certain. Moreover, while the proposal is aimed at promoting voluntary integration, it would be asked why school districts required to desegregate should also not receive funds. They have the same problems; they face the same opposition. Yet to include all districts which are desegregating would raise the cost even more.

Voluntary integration has not had an impressive record so far. While many communities have acted on their own to reduce racial concentrations in the schools, virtually all of them have had relatively few minority students and relatively low initial levels of segregation. Substantial integration generally has occurred only where the courts or the Office of Civil Rights has required it. It is not clear that money would change this pattern.

Nonetheless, if the Congress wanted to promote voluntary integration in the public schools, here are several ways it might be done:

--Amend ESAA to provide substantial, long-term grants

--Provide direct grants to local educational agencies which voluntarily maintain or increase the level of integration in their schools

--Amend other Federal education programs to provide bonuses for voluntary integration.

2. Subsidize Alternatives to Busing

Recently much of the opposition to school desegregation has focused on busing. In particular, many people oppose cross-busing, that is, busing white students to schools which formerly were predominantly black and black students to schools which formerly were predominantly white. Of course their principal objection is not to busing itself: they are more concerned about what happens at the end of the ride. Nonetheless, according to a Gallup poll opposition to busing is today so common, even among people who favor desegregation, that the Federal government might consider subsidizing alternative ways of reducing racial concentrations.

A number of such alternatives exist. One which has received a lot of attention lately is the magnet school. This is a school with a special curriculum for students interested in concentrating on certain subjects, such as the medical sciences, or in learning certain skills, such as acting. New York City has had schools like this for a long time, while Houston, Washington, and other cities have recently established them. A second possibility is the so-called school without walls. This is an academic program in which students pursue their studies in different locations: art museums, medical laboratories, community colleges, etc. Chicago and Philadelphia have established schools like this. Still a third possibility which has been tried in many places is a temporary or part-time educational program such as a summer camp or a community service project. All these alternatives generally are designed to attract students with different backgrounds, though sometimes racial or ethnic balance is required.

The Federal government to some extent already provides money for these alternatives. The Education Amendments of 1976 permit ESAA money to be spent on planning and designing magnet schools or on conducting programs in them. ESAA money may also be spent for such programs as schools without walls or on temporary or part-time programs.

However, proponents of these alternatives to busing argue that there is not enough ESAA money to bring about significant reductions in racial concentrations. Part of the problem is that annual ESAA appropriations are not sufficient for local educational agencies to finance alternatives serving all the students in a school district. Where alternatives are offered, they can be made available to just a few students. They cannot serve as substitutes for widespread busing. Another part of the problem is that ESAA money is available only on a yearly basis. As explained above, there is no guarantee that programs funded one year will be funded the next. Local educational agencies are reluctant to start programs for which they may have to use their own money in the future. Finally, no ESAA money may be spent for constructing magnet schools or for renovating old buildings to serve as such schools. The big initial expense must be borne by the school district. It is claimed that there is not even much money available for operating magnet schools.

The principal argument to be made for these alternatives to busing is that they may be attractive to people who otherwise would oppose desegregation. Magnet schools are appealing because they offer specialized curricula. Schools without walls are innovative. Temporary or part-time programs allow students to remain in neighborhood schools for most of the time. Most important, all these alternatives offer some degree of choice: if students like the integrated schools or programs, they can remain enrolled; if they dislike them, they can return to the places or the work to which they would normally be assigned.

However, some people oppose these alternatives for the very reasons others find them attractive. Magnet schools are criticized because they have specialized curricula: some people believe their approach to education is too narrow and vocational. Schools without walls are criticized because they are experimental: some people believe they lack standards and discipline. Temporary and part-time programs are criticized as peripheral: some people think they are essentially frills. In short, alternatives to busing are really alternatives to traditional schooling. Not everyone thinks they are desirable.

The voluntary nature of these alternatives also raises problems. Giving parents the choice of whether to enroll their children in integrated schools or programs may not result in much integration. Freedom-of-choice plans have rarely been successful. Even if many parents did permit their children to enroll, they might withdraw them whenever problems arose. Integration would only be temporary. Alternatives to busing thus might not actually result in much desegregation.

Nonetheless, if the Federal government decided to support some of these alternatives to busing, here are a few ways it could do so:

--Expand the authorization for appropriations in ESAA

--Amend ESAA to permit money to be used for constructing magnet schools (and for renovating old schools for this purpose)

--Amend ESAA to permit grants to continue as long as alternatives to busing are provided

Appendix

1. How are Federal education programs likely to affect State and local educational agencies?

Recently there has been much debate over the impact of Federal education programs on State and local educational agencies. One of the issues involved is whether the Federal government should provide general financial assistance or categorical aid. Currently most Federal money for elementary and secondary education is made available only for specific purposes. It is to be spent just for certain programs such as compensatory education or ethnic heritage studies or just for certain students such as Indians or the handicapped. It cannot legitimately be used to pay for general operating expenses or to keep State and local taxes low. The one exception to this rule is Title I of P.L. 874 (one of the impact aid programs), which has relatively few restrictions.[1] Under consolidation legislation (Title IV of the Elementary and Secondary Education Act and Part A of Title I of the Vocational Education Act), the States can decide which programs among a number will be offered and which students will be served, but their range of choice is limited.

A second issue is how much discretion State and local educational agencies should have in running Federal programs. Currently Federal

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1/ The Federal funds for elementary and secondary education with the fewest requirements are funds available for State and municipal governments under the State and Local Fiscal Assistance Act (some of which are passed on to local educational agencies) and funds provided as the States' share of lease payments made by private firms using Federal lands. These funds are not normally considered as being provided through a Federal elementary and secondary education program.

elementary and secondary education programs have numerous requirements. Some of them are statutory, others originate in regulations; some govern what programs are to do, others deal with administration. While a number of requirements are less stringent than State laws or are simply pro forma, many force State and local educational agencies to alter their educational policies or change their administrative practices as a condition for receiving aid.

Some people argue that Federal programs create too many problems for State and local educational agencies. In particular, they charge that categorical grants prevent State and local officials from putting money where it can best be used. If Federal education goals are to be achieved, it is said, these officials must be given authority to shift funds to programs and students which have the greatest need. National formulas are not always suitable for measuring that need in particular States or school districts.

A second charge is that there are too many Federal education programs. By one count, the Office of Education alone is responsible for about 70 elementary and secondary education programs. Still more are administered by other parts of HEW and other executive branch departments. It seems to some that the Federal government is trying to accomplish too many things. Occasionally people complain that the multitude of programs makes it difficult to discern what the "Federal purpose" in education is.

Third, it is argued that program requirements burden State and local administrators in red tape and paperwork. It is said they deny them the flexibility necessary to run schools efficiently and effectively.

It is also said they consume too much of their time: complaints are made about long forms which must be completed, often requiring extensive testing or data collection. School officials are said to find these problems particularly upsetting since the Federal government contributers only about 7% of all public school revenue.

Behind some of this criticism is the belief that the Federal government is exercising too much control over education. The general shift in power to Washington worries some people: in the words of Joseph Cronin, the Illinois Superintendent of Education,

> ...slowly, inexorably, and incrementally, the Federal government is taking over education 2/

People who advocate categorical programs for elementary and secondary education respond that without them few States or local educational agencies would spend money (or at least enough money) for the programs and students the aid supports. This generally is why Federal programs get established in the first place. Moreover, categorical programs focus Federal financial assistance. If substantial appropriations were available for education, perhaps general aid would make a significant difference in the quality of elementary and secondary schools. As long as funds are limited, however, then aid must be targeted on a limited number of problems to be effective.

Federal requirements are also defended. It is said that most State and local educational agencies have so little experience organizing and running special programs that it is necessary to have many statutory

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2/ Joseph M. Cronin, "The Federal Takeover: Should the Junior Partner Run the Firm?" *Phi Delta Kappa*, vol. 57 (April 1976) p. 500. For a recent collection of articles addressing these issues, see *Federalism at the Crossroads: Improving Educational Policymaking* (Washington: Institute for Educational Leadership, 1976).

restrictions and detailed administrative regulations. Requirements for planning and evaluation are especially critical. More important, it is argued that Federal requirements are essential to minimize the fiscal substitution of Federal dollars for State and local funds and to maximize their intended educational effects. The ease with which Federal funds can disappear without having any perceivable impact, so it is claimed, makes strict controls necessary (see the answers to the third and fourth questions in this appendix).

Third, it is often pointed out that while Federal reguirements make demands upon State and local officials' time, much of the administrative cost of Federal programs is subsidized. In fact, it has been estimated that more than half of the positions in most State educational agencies are paid for by Federal dollars.[3/]

Finally, if the problems of Federal categorical aid exceed the benefits, States and local educational agencies can always choose not to accept it. They are not required to take Federal money; they do not have to administer the programs it suport. While a few States and local educational agencies have occasionally rejected Federal categorical money, the fact that virtually all of them accept it suggests that the problems may not be as serious as is claimed.

This is not the place to weigh the merits of these arguments. How Federal programs affect State and local educational agencies is a

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[3/] Joel Berke, Jay Moskowitz, and Judy Sinkin, "Federal Aid and State-School Finance: Present Patterns and Future Alternatives," in School Finance Reform: A Legislators' Handbook (Washington: National Conference of State Legislatures, 1976), p. 94.

subject which deserves more analysis than is possible here. However, it is important to mention that in recent years a number of people have advocated consolidation as a way of improving Federal education programs. Consolidation essentially involves grouping categorical programs into clusters, giving State or local educational agencies a block grant for each cluster, and then permitting the agencies to determine how money from each grant is to be used for purposes of the programs making up the cluster. As mentioned above, Title IV ESEA and Part A of Title I of the Vocational Education Act are examples of Federal consolidation legislation.

Consolidation could take many forms. At one extreme, all Federal program money might be given State or local educational agencies in one lump sum with few restrictions about its use. At the other extreme, Federal categorical programs might be grouped into many separate block grants, each of which carries numerous restrictions. Debate over these proposals in the past has centered on which programs should be included and how much money would be appropriated. Other critical issues have been whether Federal money should go directly to the State or the local educational agency; whether there should be set-asides for particular programs or certain costs; whether plans for how the money will be used should be required (and if so, whether the U.S. Office of Education must approve them), and whether Federal evaluations and audits should be permitted.

Consolidation is likely to be an underlying issue with respect to future Federal education legislation. It remains to be seen whether

Congress will continue the several program consolidations already enacted, turn them back into categorical grants, or expand the number of programs included. It also remains to be seen if the program consolidations already enacted have any effect on the problems critics of categorical programs believe so serious.

2. How much money is likely to be spent on new Federal education programs?

For fiscal year 1977 the Congress has so far appropriated $5.332 billion for Federal elementary and secondary education programs:

Fiscal Year 1977 Appropriations for Elementary and Secondary Education (in millions)

Disadvantaged education (Title I)	$2,285	Teacher Corps	$38
Impact Aid	793	Title IV CRA of 1964	35
Vocational education (includes some adult and postsecondary)	594	Right to Read	26
Handicapped education	469	Broadcasting facilities	15
Emergency School Aid	240	Career education	10
Indian education (Bureau of Indian Affairs)	236	State equalization	10
Support and innovation	194	Environmental education	4
School libraries	154	Gifted and Talented education	3
Bilingual education	115	Ethnic Heritage	2
Follow Through	59	Drug Abuse education	2
Indian education (OE)	45	Education in the Arts	1
		Ellender Fellowships	1

This sum is about 1.15% of total Federal appropriations.[4] It will contribute approximately 6.6% of all revenue for public elementary and secondary schools[5].

It is not easy to predict how much money might be appropriated in fiscal year 1978. President Carter has requested $5.374 billion for the same programs, an increase of 0.8% (he has requested an increase of $440 million, or 8.25%, for all programs but the impact aid programs, for which he is recommending a $398 million cut). The Congress might appropriate this sum, or it might appropriate a higher or lower amount. Its decision will be based upon a large number of issues, only several of which turn on questions about Federal education programs (some of these issues are discussed in this appendix).

It is even more difficult to predict how much money might be appropriated for elementary and secondary programs in subsequent fiscal years. If the annual total continues to grow by only 0.8%, as the President recommends for fiscal year 1978, there will be no leeway with which to finance new programs. Even if the total grows by 8.25% as he recommends for all but the impact aid programs, there will be little leeway. Much of that would be consumed if appropriations for currently-funded programs were adjusted annually for inflation. All of it would be consumed if appropriations for some currently-funded programs were raised to the full funding level (full funding of Title I ESEA alone would cost an additional $2 billion). Of course appropriations for some currently-funded programs could be reduced or even terminated, thus freeing additional funds for new programs. Given the present climate of opinion, most think this is unlikely to occur.

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[4] Based upon $467 billion for total new budget authority set by the third concurrent resolution on the budget.

[5] Other Federal money is also made available to public elementary and secondary schools through such programs as the State and Local Fiscal Assistance Act and the National School Lunch Act.

Many of the policy options discussed in this report require significant appropriations. Some of them, such as subsidizing the cost of fiscal equalization among local school districts, would at the minimum require several billion dollars more spending. None of these options need be rejected out of hand. If present budget priorities make their immediate enactment futile, perhaps in the 1980's they can be considered feasible.

Nonetheless, present budget priorities cannot be ignored. Constraints on additional Federal spending for elementary and secondary programs are as important as judgments about the developing issues discussed earlier. They are as important, and certainly more salient, than the other issues discussed in this appendix.

3. What fiscal impact is money in Federal education programs likely to use?

There are at least three issues to be resolved in ansering this question. The first is where in the country Federal dollars are likely to go. For some programs, such as local educational agency basic grants of Title I of the Elementary and Secondary Education Act, the authorizing statute specifies an allocation pattern directly to local education agencies.[6] For others, such as Title IV--Part C ESEA, the allocation pattern is specififed only to the State level; the State educational agency is given discretion on how funds are to be further distributed. Finally, there are some Federal programs, like those included in the Special Projects Act, for which decisions about how the money is to be distributed are left to the U.S. Commissioner of Education. Predicting where in the country Federal money is likely to go is easiest in the first case; it is hardest in the last.

The second issue is who is likely to benefit monetarily from the programs supported by the Federal dollars. Federal education programs generally specify what money may be spent for, such as current expenditures (sometimes broken down into the separate costs for teaching, supplementary services, administration, equipment, books and supplies, etc.) or construction and renovation expenditures. Occasionally there are limits placed upon the proportion of money which may be spent for certain costs. From these requirements one can make a rough estimate of the category of people likely to receive the money initially. Who will subsequently receive the money (that is, after the initial recipients spend it) is an interesting economic question on which little research has been done.

The third issue is whether there is fiscal substitution of Federal money for State and local revenue. It is difficult to ensure that all Federal dollars make a net fiscal addition to expenditures for elementary

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[6] See Sec. 103. In practice the U.S. Office of Education allocates money to counties and gives State educational agencies the responsibility for distributing funds among local educational agencies on the basis of approved procedures.

On the other hand, it can be argued that States and local educational agencies need the fiscal leeway supplanting gives them. If one believes that the Federal government ought to provide general school aid, this would be one way of doing so. Second, effective prohibitions against fiscal substitution might be more trouble than they are worth. They might require standardized accounting procedures, thorough audits, and stiff penalties for violations. Finally, in some cases fiscal substitution may be the only efficient and equitable way States with well developed programs can use additional funds. Under the Education for All Handicapped Children Act, for example, States that can demonstrate that a free appropriate public education is available to all handicapped children will be permitted to supplant some of their own funds with the new Federal money they will receive. Without this provision, States already spending relatively large sums per student would have no alternative but to spend even more.

4. What educational effects are Federal education programs likely to have?

Whether Federal education programs have their intended educational effects depends upon several factors. One is the extent to which there is fiscal substitution. As shown in the answer above, when Federal dollars supplant State and local dollars, they do not purchase additional educational inputs. They have no net educational effects at all. Even when there is no fiscal substitution however, Federal funds still might not purchase additional educational inputs that are useful, or they might not purchase additional inputs for the appropriate students. To the extent this is the case, the educational effects will be less than expected.

There are different kinds of problems here. The first is the problem of poor targeting, of or not channeling resources to students for whom they are intended. Some Title I programs, for example, have been criticized for not targeting compensatory courses and equipment properly.[9/] A second problem is that though money is spent on the right students, it may not be spent on instruction: instead, it may be diverted to administration or other overhead services. In 1974 the General Accounting Office reported that a number of States were spending too much money received under the Vocational Education Act for administration.[10/] Still a third problem is that while the money is spent properly, there may not be enough of it to make a difference. If relatively few dollars are added to what is already being spent, they are unlikely to have any effect. Finally, some Federal money may unintentionally be used for instruction which is not effective, that is, which does not make a significant difference in student achievement.[11/]

It is debatable whether any of these problems can be solved so Federal education programs have more of their intended educational effects. Poor targeting and diversion of funds from instruction have

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9/ Michael J. Wargo, et al., Further Examination of Exemplary Programs in Educating Disadvantaged Children (Palto Alto: American Institutes for Research, 1971) p. 9-10. While no independent comprehensive study of targeting has been done recently, problems undoubtedly still exist. See the announcement for the Federal Education Project of the Lawyers' Committee for Civil Rights Under Law in Education Daily for December 16, 1975 (vol. 8, No. 247).

10/ What is the Role of Federal Assistance for Vocational Education? (GAO, Dec. 31, 1974), p. 10-13.

11/ See Assessment of Reading Activities Funded Under the Federal Program of Aid for Educationally Deprived Children (GAO, Dec. 12, 1975), p. 7-12, for a discussion of this point with respect to Title I programs. Not all Title I reading programs have been found to be ineffective: see for example A Descriptive and Analytical Study of Compensatory Reading Programs (Princeton: Educational Testing Service, 1975-76).

both been addressed by legislation and regulations, yet problems remain. Some commentators doubt that administrative oversight can ever be thorough enough for there to be much improvement.[12/] The third problem -- insufficient funding -- is largely a matter of the amount of the appropriation and the degree of fiscal substitution. Other factors which might make a difference are the allocation formula (does it authorize large enough grants to each eligible State or local educational agency?) and limits on program size (are small programs excluded?) The last problem -- ineffective instruction -- is essentially due to lack of a general education production function, that is, to lack of a general theory of what works and what does not. There is much skepticism that such a general theory will ever be developed. No one approach seems to work for all students in all circumstances.[13/]

[12/] See the article by Milbrey McLaughlin "Implementation of ESEA Title I: A Problem of Compliance," Teachers College Record, vol. 77, No. 3 (February 1976), p. 397-415. McLaughlin argues that lack of common goals, absence of critical knowledge, inadequate incentives, and ineffective authority weakens compliance with legislation and regulations.

[13/] For a review of the literature on this point, see Harvey Averch et al., How Effective is Schooling? (Santa Monica: Rand, 1972). For a study pointing out what might be accomplished, see Anita Summers and Barbara Wolfe, "Which School Resources Help Learning? Efficiency and Equity in Philadelphia Public Schools." Federal Reserve Bank of Philadelphia Business Review, 1975.

APPENDIX 3

St. Mary's College of Maryland

ST. MARY'S CITY, MARYLAND 20686

April 29, 1977

Ms. Anne W. Cheatham
Congressional Clearinghouse on the Future
3605 House Annex #2
Washington, DC 20515

Dear Ms. Cheatham:

Please find attached some items for consideration in regard to the foresight hearings on trends in education to be held by the Subcommittee on Elementary, Secondary, and Vocational Education of the Education and Labor Committee.

My area of expertise is higher education and consequently my comments are from that perspective. However, I believe there are certain trends presently evident in higher education which require a response at the secondary level and are particularyly relevant to vocational education.

I hope my considerations are of some assistance.

Sincerely,

Fredrick R. Brodzinski

Frederick R. Brodzinski
Associate Dean of Students

/pw
attachment

Career guidance in elementary and secondary education needs to be made more responsive to the present and future employment outlook for college graduates. Alternative postsecondary sources of education should receive more exposure as opposed to the traditional emphasis placed on the necessity of full-time college attendance. Consider the following:

1. The ratio of professional and management jobs to the number of college graduates fell 2.8% per year from 1969-74 (Freeman and Holloman).

2. The supply of college graduates now exceeds the demand for the college trained.

3. The proportion of professional and managerial jobs in our society is likely to remain at 25% for the next decade. Meanwhile, American colleges are producing the highest numbers of graduates in our history -- both in actual numbers and as a proportion of the total population. (Freeman & Holloman)

4. The College Placement Council predicts an oversupply of about 900,000 college graduates by 1985.

5. Between 1966 and 1976 the number of people holding bachelor's, master's, and Ph.D. degrees increased almost 200%. During the same period, the number of professional, managerial, technical, and administrative jobs in the United States increased only by 31%.

References

Freeman, Richard B. *The Over-Educated American.* Academic Press, 1977

Freeman, R. & Holloman, J.H. "The declining value of college going." *Change.* September 1975.

Anne W. Cheatham
Congressional Clearinghouse
on the Future
3605 House Annex #2
Washington, D.C. 20515

May 3, 1977

Dear Anne:

The following is in response to your 26 April request for a brief response on what is important in or for career guidance in elementary and secondary education:

1. Career guidance implies forecasting the job market.
2. Forecasting the job market implies forecasting demography, technology, and social values.
3. The ability to forecast or evaluate forecasts is therefore necessary for useful career guidance - especially for those in elementary education since those students enter the work force in 1985-2000.
4. A survey of such techniques and sources is published by the World Future Society for CRS and NSF. Social and Technological Forecasting Should be Required for Guidance Counsellor Certification and refresher courses should be encouraged.
5. It would also be extremely useful if curriculum were future-oriented to give students a better sense of the possible future skills requirements. One example is "Futuring," Instructor (Jan. 1973) (see enclosure)

There are computer assisted counselling programs. But they often conclude that the student should then "talk with the guidance counsellor." But if the guidance counsellor doesn't have a clue as to the shape of the next 20 years job market, then of what use is the counsellor? We told people to go into teaching. Now there is a teacher surplus. Now we tell people to go into computer programming. And there will again be a surplus in five or more years. There is no way around it - we must forecast or learn how to evaluate forecasts. This is the most important addition for career guidance in elementary and secondary education.

Sincerely yours,

Jerry Glenn

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Futuring—a look at tomorrow today

JERRY GLENN

"Futuring" is a term you hear frequently today and will hear more and more often as people recognize its importance. Considering the implications of present trends and anticipating the future are valuable ideas teachers must not ignore.

In the following article, Mr. Jerry Glenn, Instructor in the School of Education at the University of Massachusetts, Amherst, presents a rationale for futuring as well as specific processes you and your pupils will find challenging and stimulating.

OVER the years we have created learning environments that enable students to discover the *past* more freely than ever before. But it is no longer adequate for children to learn about the past. Nor is an uncritical awareness of the present adequate. To insure survival, psychological as well as physical, man must learn to think about the possible futures that can grow from the present; he must understand more fully what has to be done today to prevent the undesirable and create a more desirable future.

Because we have concentrated the major part of our education on past and partial-present awareness, our nation has been surprised by race riots, widespread drug abuse, and the population explosion's by-products—pollution, depletion of resources, crime, violence, rising anxiety. If our science teachers had facilitated our thinking into the future, we might have recognized the possibility of widespread drug usage, pollution, and technology's devouring of resources. If our social studies teachers had led us into thinking into the future, we might have recognized the possibility of widespread anxiety, race riots, and cultural violences. This is

What do we mean by grade one? Level three? Ten-year-old? No matter what terms we use, each child is unique. We can develop learning experiences which bridge the boundaries suggested by conventional terms; we can open levels of learning for all children.

not to say that teachers are solely responsible for our social failures. But education is part of the problem and hopefully will become a strong element in the solution process.

Partly because our education did not use the past and present to anticipate possible futures, our people are demanding "crash" programs to solve pollution, racial, and violence problems. If we do not begin to futurize education, we may need in a few years "crash" programs to solve loss of individual identity, mass future shock, dismal accumulation of data and of material objects, or to rebuild a world culture after the great catastrophe brought on by failure to solve the problems of population, arms control, the development gap between rich and poor nations of the world, and the depletion of resources.

We must develop and test teaching approaches that will help students think in an anticipatory way about future consequences. Such thinking will serve two purposes. First, it will help students to look for and recognize future trends. Second, it will make them realize that the future depends to a great extent on what is happening in the present and heighten their awareness of present occurrences.

How do you start to teach for such an outlook? You can organize your class for daily or weekly formal activities on the subject. There are even commercial kits available to guide you. But before you plunge into a reorientation of your group, start with some short, simple ideas. You can try out any of these suggestions tomorrow morning.

- Have a pupil draw a picture of himself doing something in the past, another of something he might be doing in the future. Ask him to explain the difference. What does his answer tell me about the future? How do those assumptions influence his present behavior?
- Ask these questions. "What can you do today that you couldn't do before? What would you like to do in the future that you can't do now? What do you have to know today so that you'll be able to do it in the future?"
- Have group cut out magazine pictures of things that are increasing and decreasing. (For example, the many new uses of plastics and the much reduced passenger travel by railroad.) Put the increasing things' pictures together, and the decreasing things together. What is the difference between the two composite pictures?
- Ask the group what the class might be like at a 1992 reunion.
- Let pupils think about these questions: What guarantee would you have to be given about your future for you to be happier and act more positively today? What might you be able to do today to get that guarantee?

From the activities just described can come some serious discussions on the future of some specific situation. Take a topic as familiar as transportation, for example. Futuring this topic calls for consideration of such aspects as the situation as it is today, the question of using individual versus mass-transit vehicles, the availability of a plentiful and economic fuel supply, the need to move large numbers of people quickly, the safety vehicles, and the fact that people will demand convenience and comfort in getting from place to place. Pupils will think of related aspects—the need to allocate even more land areas for transportation routes, the possibility of staggering working hours in high industrial areas to alleviate traffic jams, the significance to the economy of fewer personal vehicles being manufactured because more and more people use the mass-transit systems. As pupils discuss some of these possibilities, their view of today and its problems will lead them to consider actions and decisions that must be done now to solve future problems.

You can then go on with this more highly developed future-oriented teaching process. It may be divided into four steps.

1. Each student identifies for himself the trends of a particular topic.
2. Individually or in groups, students make projections into a future date describing what life may be like, determined solely by those trends identified in the first step.
3. If that future state is not desirable, students then invent and describe what would be desirable.
4. Finally, students work back in time from the desirable future model to the present in order to learn what needs to be done to bring about a more acceptable future.

Let's investigate more closely what each of these steps involves.

1. Trend identification—A trend is an influence on human behavior that noticeably increases or decreases over time. It must be existent in some form in the past and present, and reasonably expected to continue into the foreseeable future. Population increase is an example of a trend.

List trends that are mentioned in a class discussion—increased use of motorized vehicles, increased amounts of fringe benefits provided with each job, decreased numbers of one-man owned and operated businesses and farms, and so on. The list can be almost endless as pupils begin to think.

To illustrate the effect of trends on people, suggest pupils think of a trend as a magnet that attracts or repulses. Then imagine a bunch of magnets arranged on the walls of a cylinder. With the cylinder lying on its side, the front end represents the past, the middle the present, and the end the future. Small pieces of metal might represent people or groups of people. As these metal pieces are thrown through the cylinder, they will change their straight-line trajectory depending on the relation of the magnets to each other and to their pull on the metal pieces. The overall paths of the pieces together going through the cylinder may be thought of as the course of history.

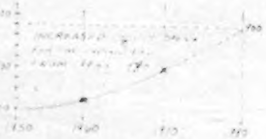
This is not to be taken so firmly as the end-all model for historical analysis. It simply illustrates what is meant by trends and how they influence life. If you were teaching science, you might have the students walk around the community to identify increasing and decreasing influences on people through science. Some examples might be more technical equipment in offices, fewer people experimenting with medicines or using home remedies. If you were teaching social studies, students might go through magazines to cut out pictures of increasing or decreasing influences on people like pictures of more locks on doors, fewer religious pictures on Christmas and other holiday cards, and so on.

One way to help students understand the complexity and implications of their trends is the use of a future wheel. A pupil writes a trend in the middle of a sheet of paper, then draws lines out from the center, which like. At the end of each line, he writes the factors and the results of the central trend. Here is an example of one pupil's wheel.

Primary children can make a class wheel. Pick a "trend" that they know well and can react to—perhaps the decreasing numbers of crayons in the crayon box or the increasing numbers of words each can recognize.

This technique clearly demonstrates that a single trend cannot be thought of as isolated from other factors in society. After trend identification, we must see where such trends might take us.

2. Future projections—Where are we going? Groups of four or five students might get together to put their trends on one wheel for projections or to put them together on a graph. Many future forecasts are made simply by graphing. Plot a trend from some point in the past to the present, then with dotted line continue out the curve to the date to which you wish to project. This is the forecasting tool used by those who say, *"If present trends continue, we can expect the world population to double in the next thirty years."* It may be difficult for pupils to get data with which to plot a graph, so here's a suggestion. Suggest they survey the community or students in the school as to how much each thinks something is increasing or decreasing. Let's say the trend is the increasing cost of skiing. Suppose they call the cost of skiing for each individual 100 in the year 1950. Then ask what it would be called in 1960, and 1970. Did the cost go up two times, three times? Pupils could average all the responses they secured to arrive at a figure for graphing. Here's a graph that one class committee developed.



Based on the opinions of the community and projecting those opinions, we can say that we expect that the cost of skiing will increase nine times from 1950 to 1990. (Some pupils are sure to argue, of course, that the facilities for skiing have much improved over those years. It's true that the higher cost has brought with it new and more efficient ski lifts, better-cared-for slopes, luxury ski shops with all sorts of conveniences, and so on—another topic for further deliberation.)

Another way students can put their trends together is with the cross-impact matrix. Team up four or five students into groups. Ask the groups to put their trends together and have them discover the interrelationships. Each person's trend is listed down in a column at the [illegible] made and filled in. To complete each box, ask, "If the trend in the down column continues, how will it affect the trends in the top row?" Below is an example of part of a matrix that a fifth-grade class developed.

One individual might do the same thing, using three basic trends and cross-impacting them.

This instrument can be used to show the interdependence of almost anything—perhaps even the body systems, listing the systems down one side and again across the top. To fill in the boxes ask, "If the system in the down column malfunctions, what is the effect on the system in the top row?"

The cross-impact matrix is an excellent way to teach logic and creative questioning. While students are filling in the boxes, they can think about how their answers might affect our whole ecosystem and if they will help satisfy human needs.

3. Future models—With these tools or others that you and your students can think up, launch into excursions, simulations, games, brainstorming sessions, or whatever. With these experiences as background, have individuals or groups of students write, paint, create a play, make models, to explain in some way what the future might be like based on the trends identified—assuming that no intervention occurs to change the trends significantly. The students should decide on a date in the future that they all wish to project to. A play concerning a day in that future life should help clarify students' ideas as to jobs, cities, family living, and other important issues of that time in the future. It should also help them begin to think on whether or not that future is desirable.

It would be interesting to note differences between students' perceptions. The assumptions each makes about the future is one way of understanding one's actions in the present. Discuss with pupils why there are differences. Are they confusing what they think will happen with what they would like to see occur?

This easily launches into a discussion of what they believe is the best future or what they want the future to be like. If the date of the projections is 1980, suggest pupils explain in some form what they want 1980 to be. Try to help them "taste, touch, and feel" what that desirable future might be like. If you are working with young pupils, make their future only two or three years away—when they are in fifth grade, for example. This will be easier for them to visualize. (You will find there is a strong correspondence between students that hold a desirable view of the future and constructive behavior, whereas those that hold a negative view of the future tend to act more self-destructively.) Try to have the students keep in mind the life support system of nature and human needs.

4. Policy creation—What must be done for a better future? The example of a tree may be helpful to show students how to trace back to the present tense from the desirable models of the future. Think of one leaf on a tree as the desirable future model among many other leaves (other possible futures). For the water to get from the roots to that leaf, it must travel through many "forks in the road." The forks may be thought of as decisions or actions. The water has to make "correct decisions" at each fork or else that leaf will never grow. In a like manner, certain policies (actions or decisions) must happen for the desirable future to grow out of the present. If growing corn is a desirable future, then there must be land, seed, water, necessary nutrition in the soil, and sun. So one's policies would be to find land and seed, check the soil, and see to it that water and sun is available. It is obvious that corn will never grow if one of those policies is not actualized. Similarly, the students' desired future will not come about unless certain decisions and actions come first. Can pupils figure out what are the necessary steps to the future they desire? Do they have a reasonable chance of completing the steps?

Suppose your group wishes to begin putting some of these steps into motion. Then a brainstorming session is in order to develop as com-

[illegible] as possible of all the policies which [illegible] support to achieve their desirable future. Once the larger list is made, have each student individually cross out all those policies he or she could not work on due to personality, age, geographic position, or other factors. From the remaining policies, cross out all those that would not begin to yield visible results or desirable by-products within six months (people [illegible] compensated by positive results of [illegible]). Then from the remaining list, pupils can pick the ones they would enjoy doing the most. This is a simple method for finding policies that make a difference, are important to a better future, and that have a reasonable chance of [illegible] attainment.

The [illegible] process [illegible] image [illegible] process. It is [illegible] steps one and two [illegible] view of the future. If you are going to [illegible] steps one and two, [illegible] It is not important that [illegible] steps be done in sequence. We [illegible] the process with [illegible] begin with step three [illegible] and create more useful information by beginning [illegible] And of course [illegible] teacher and [illegible] students [illegible] trends [illegible] their families,

then go through the four steps. This process will be repeated with trends of the community, of the nation, and finally of man's relation to the environment.

By expanding on some of the ideas in this article you can initiate your students without big cost to your school budget. But if you want to investigate some of the commercial materials on [illegible] the Future [illegible]

[illegible]

Open-Level Learning

From page 80

The Center for Curriculum Design
823 Foster Street
Evanston, IL 60204

World Law Fund
11 West 42nd Street
New York, NY 10036

Science Fiction Research Association
Box 3186
The College of Wooster
Wooster, OH 44691

Center for Integrative Studies
State University of New York
Binghamton, NY 13901

World Resources Inventory
206 West College—Pattin Bldg.
Box 909, Carbondale, IL 62901

The World Future Society
Box 19285
20th Street Station
Washington, DC 20036
(publishers of the FUTURIST magazine)

A consortium of teachers have formed to futurize understanding through education in Vermont, New Hampshire, and Massachusetts. They can be contacted through The Program for the Study of the Future in Education, School of Education, University of Massachusetts, Amherst, MA 01002.

We have been trying to understand the world historically, scientifically, economically, and artistically. Now let's try to think of ways to understand the world futuristically. In his book *Future Shock*, Alvin Toffler says, "... Even more important than any specific bits of advance information ... is the habit of anticipation. This conditioned ability to look ahead plays a key role in adaptation. ... Far more common, however, are those individuals whose anticipations are so dim and short-range that they are continually surprised and frustrated by change. ... We must enhance their sense of the future. ... To create such images and thereby soften the impact of future shock, we must begin by making speculation about the future respectable. ... why not courses in 'Future,' courses in which the possibilities and probabilities of the future are systematically explored. ... Education must shift into future tense."

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Area Code (415)
826-3125

18 May 1977

Ms. Anne W. Cheatham
Congressional Clearinghouse On The Future
3605 House Annex #2
Washington, D.C. 20515

Dear Anne:

This is in reply to your request of 26 April for a concise statement on trends in education. I regret that the press of other business kept me from meeting your 10 May deadline, but I hope that this will be helpful in some way, anyhow. In accord with your request and my time, I will keep this very brief.

Re demographic influences on elementary-secondary education: These are increasing already severe fundamental strains in most communities. The educator community has systematically ignored demographic trends, particularly the baby bust. Teacher training institutions have continued maximum recruitment of students who, once credentialled, run into a no-jobs market, and are feeling both confused and double-crossed. Teachers who have jobs are feeling more and more militant protective about them, which results in an increase in the organization and militant activity of teacher unions. School boards are trapped politically between the need to close schools no longer needed on the one hand, and parents who acknowledge this need in principle and as taxpayers but insist that it should not be the schools in their neighborhoods which are closed. Meanwhile, with exceptions, the closed or underutilized school facilities are not finding new community uses--even though they are natural sites for meeting the burggoning adult education market. These new needs are not being found because school boards and administrators have for years maintained school facilities as "private" preserves, where informal and community services efforts are not encouraged. Besides that, boards and administrators feel their "professional authority" challenged and threatened whenever the community--whether parents or other groups demanding service--move in.

Re career guidance in elementary and secondary education. On the whole, academic and career counseling at all levels in American education has been a travesty for many years. Many so-called counselors have little or no interest or preparation for the role, having been "drafted" into it by administrators. The student/counsellor ratio in most system further makes counselling

ADVENT® ... *Foresight through Insight* impossible, quite apart from the capacities and motivations of the so-called counsellors. Further, counsellor education programs are relatively few and are weak, and counsellors definitely have an inferior professional standing in many, perhaps even in most, school systems. Counsellor education founders on an inability to confront and work-through the inherent conflicts of objectives: Should the counsellor seek to help the student "fit into" the conventional view of society which most boards still represent, even though conventional career and community patterns and values of the 50s and 60s are changing rapidly? Or should the counsellor seek to help the student become a self-directing, self-actualizing person, in school systems which for the most part are still uncomfortable with and unaccepting of such students? Given these difficulties, and the enormous need for life counselling and career counselling, many private, independent, church-based, or other institutional counseling programs are springing up. On the whole, these new resources are officially unknown to and in practice uncoordinated with school counselling programs.

I have no real input re the education of the handicapped and gifted, except to remark on the recent militancy of handicappers, and their insistence on not being segregated or kept permanently dependent in society. The new HEW Section 504 regulations, for instance, if enforced would require public schools to make fundamental physical modifications to remove mobility barriers for wheel-chaired and other physically handicapped students. The schools are certain to be an early target for handicapped lobbyists, and school districts, I believe, can look forward to years of painful and expensive litigation until some workable compromise can be found on this explosive issue.

Hope this helps. I'm enjoying the newsletter. Glad to see you've added Mike Marien to your official resources. He is THE bibliographer in the futures field. On another score, someone you should contact with an eye to inviting him to give a futures seminar for your members soon is Dr. Ted Bradshaw, Institute of Governmental Studies, University of California, Berkeley. Ted has some really new and provocative insights into the nature and challenges of an advanced industrial society (rather than Bell's post-industrial). Ask him about it. You'll find it well worthwhile. Good fortunes.

Yours sincerely,

Dave Mill

DAVID C. MILLER

dcm:m